User Guide for the Ticket Research File: TRF10

Data from January 1994 to December 2010

Volume 1

September 21, 2012

Lesley Hildebrand
Laura Kosar
Jeremy Page
Xiao Barry
Miriam Loewenberg
Benjamin Fischer
Dawn Phelps
Natalie Hazelwood

MATHEMATICA
Policy Research

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Submitted to:
Social Security Administration
Office of Disability and Income Support Programs
ITC Building
500 E. Street, SW, 9th Floor
Washington, DC 20254

Submitted by:
Mathematica Policy Research
1100 1st Street, NE
12th Floor
Washington, DC 20002-4221
Telephone: (202) 484-9220
Facsimile: (202) 863-1763
Project Director: Lesley Hildebrand

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OVERVIEW OF TRF DOCUMENTATION

This document is one of several that provide information about the Ticket Research File (TRF) to help researchers understand and use its data. The full TRF documentation includes the User's Guide, the Data Dictionary, and the Construction Guide. All of these documents are available to SSA staff on the SSA intranet site at http://ordp.ba.ad.ssa.gov/OPDR/content/research#daf. Other TRF users can contact OPDR.DAF@ssa.gov with inquiries regarding TRF documentation.

Descriptions of the documents that comprise the TRF10 data documentation

User's Guide for the Ticket Research File *(this document)***: TRF10 Volumes I and II** (Hildebrand et al. 2012). The purpose of the User's Guide is to assist users in understanding the TRF10 and related files. Volume I provides an overview of the structure of the TRF and related files, and a summary of key variables are described in more detail in the TRF10 Data Dictionary. It describes methods to use and link TRF files and other data sources for research purposes. Volume II contains detailed appendices, including file layouts for the data sources described in Volume I.

Data Dictionary for the Ticket Research File: TRF10 Volumes I and II (Hildebrand et al. 2012). The Data Dictionary provides detail on TRF variables. Volume I includes an overview of the structure of the various TRF components, a list of variables, and an explanation of each of the variable description fields in Volume II. Volume II contains specifications for each variable, including name, definition, data format, identification of the TRF component to which it belongs, data source, availability, and selected SAS code used to construct the variable. Selected variables are annotated with additional information and context for researchers.

Construction Specifications for the Ticket Research File: TRF10 Volumes I and II (Hildebrand et al. 2012). The Construction Specifications provide technical details on the construction of TRF10. Volume I describes the construction and validation process, and mainframe data processing methods. The appendices collected in Volume II include the SAS and JCL code used in constructing TRF10, validation tables and charts used, and a glossary of terms.

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I. INTRODUCTION

A. BACKGROUND

The Ticket Research File (TRF) is an analytical file housed on SSA's mainframe at the Baltimore data center, and originally designed for the purpose of evaluating the Ticket to Work (TTW) program. The TRF contains longitudinal and one-time data compiled from SSA administrative data on selected disability beneficiaries who participated in the Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI) programs between March 1996 and December 2010.

The TRF database is a longitudinal file constructed by Mathematica Policy Research (Mathematica) and updated on an annual cycle. Each year a new version is built to add records for beneficiaries who began participating in the SSDI or SSI programs during the most recent year and to update records for beneficiaries already in the TRF. The first version of the database was completed in 2004 and contained data on beneficiaries who participated in SSI or SSDI from March 1996 through August 2003. To identify subsequent annual versions of the TRF, we use the term "data year" to indicate most recent year through which the given TRF file contains data.[1] The TRF10 file, for example, includes data through December 2010 so the data year for that file is 2010. We use the term "processing year" to indicate the year a particular TRF file was built and it is generally the year immediately following the data year. Thus the processing year for the TRF10 file is 2011.

[1] The first two versions of the TRF used a sequential naming mechniam to refer to the file. Specifically, TRF.1 was the first version of the TRF. The next version, TRF.2, was updated to include beneficiaries who came on the rolls during 2004 and was completed in 2005.

In 2005, the naming mechanism was changed to the format currently followed. Specifically, for the third update, the database was renamed TRF05 to indicate that its contents included data through 2005. That naming convention has been followed in subsequent years.

The purpose of this user's guide is to assist users in understanding the TRF10 and recently developed TRF-linkable SSA and non-SSA administrative files. The guide provides an overview of the complex structure of the TRF and other administrative files. It then provides a detailed summary on on the key variables contained within the TRF, which are summarized in more detail in the TRF10 Data Dictionary (forthcoming.) Finally, it presents methods to use and link the various files within the TRF and other data sources for research purposes.

Detailed information on the methods used to build the TRF can be found in the TRF10 Construction Guide. This document, along with all other TRF documentation, is available to SSA staff on the SSA intranet site at http://ordp.ba.ad.ssa.gov/OPDR/content/research#daf. Other TRF users should contact OPDR.DAF@ssa.gov with inquiries regarding TRF documentation.

B. ORGANIZATION OF THIS DOCUMENT

Chapter II provides an overview of the database, including a description of the structure, contents, and administrative data sources, and a diagram showing the relationship between various components. The detailed layouts of each administrative file are provided separately as appendices.

Chapter III includes a list of TRF variables as well as tables of the variables grouped according to analytic categories.

Chapter IV presents principles of data usage and includes a discussion of data anomalies that require special procedures when using the TRF for data analysis.

Chapter V describes the criteria used to select beneficiary records from the SSA administrative files, the methods used to build the TRF database, and provides a brief history of the development of the TRF.

Chapter VI describes the construction and use of special indicators to analyze beneficiaries' patterns of benefit receipt, work, and suspension from benefits.

Appendices A through Q contain information on TRF construction methods, detailed information on variables of interest, and file layouts.

II. DESCRIPTION OF THE TICKET RESEARCH FILE

A. Overview

The Ticket Research File (TRF) is an analytical file housed on the mainframe at the Baltimore SSA data center and contains longitudinal and one-time data on selected disability beneficiaries who participated in the SSI or SSDI programs at any time between 1996 and 2010. The data are extracted from various SSA data files, including the SSI Ledger File (SSI-LF), the Characteristics Extract Record 100% Field File (CER100%), the Master Beneficiary Record (MBR), the Payment History Update System (PHUS), the Disabled Beneficiary and Dependent extract (DBAD), the Disability Control File (DCF), Ticket payments, 831 & 832/833, and Numident. Many longitudinal variables have data for the time period January 1994 to December 2010. Some variables have shorter time ranges, but none is earlier than January 1994. Longitudinal variables include such items as state of residence, impairment codes, and benefit payments, while one-time variables include data such as SSN and Date of Birth. Data from SSI and SSDI sources are combined into a single record per beneficiary. Note that throughout this document, references to Title II (T2) and Title XVI (T16) indicate SSDI and SSI, respectively.

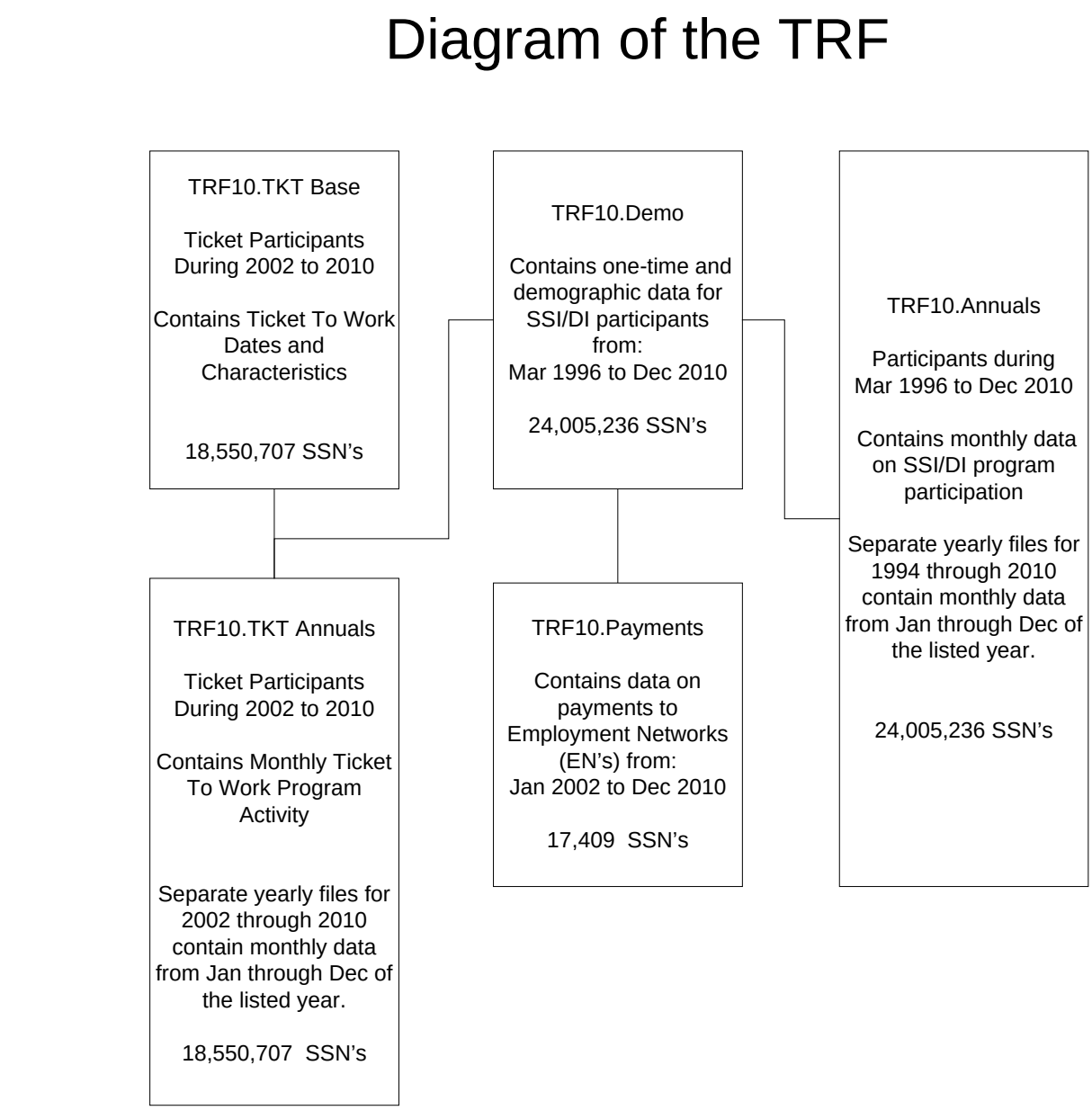
B. Structure of the TRF Database

As shown in the diagram below, the TRF database is sectioned into four components, each containing different types of information. Each component is sorted by SSN or COSSN (Social Security Number) which is used to link each component to another. Each component may also be used individually.

- **TRF.Demo**: contains demographic and one-time information, such as birthdate, name, and program application dates.
- **TRF.Annuals**: multiple yearly files that contain series of monthly variables for each year.
- **TRF.TKT**: contains data particular to the Ticket to Work program, such as Ticket mail and assignment dates.

- **TRF.Payments**: contains data relating to payments made to Employment Networks (ENs) for services provided to Ticket participants.

Figure II.1 Diagram of the TRF



Below we describe each data source in more detail.

1. TRF.DEMO

This component contains primarily demographic data and other permanent characteristics, such as SSN, for 24,005,236 records, stored on tape. Some records are for SSI beneficiaries only, some

are for SSDI beneficiaries only, and some are for concurrent beneficiaries who receive both SSI and SSDI. Data items that are specific to the SSI program are blank or missing if the beneficiary participates only in the SSDI program, and vice versa for data items specific to the SSDI program. For example, the SSDI variable TOCn (Type of Claim) is blank for SSI-only beneficiaries, and the SSI variable MINELGRD (Date of Initial SSI Eligibility) is blank for SSDI-only beneficiaries. Also included are a limited number of longitudinal data items that are not well suited to inclusion in the TRF.Annual files, such as Primary Insurance Amount for SSDI beneficiaries.

2. TRF.Annuals

Records in the TRF.Annuals files contains a separate file for each year from 1994 to 2010; each file, stored on tape, contains 24,005,236 records, the same number as in TRF.DEMO. Participant records were selected for inclusion from 1996 onwards but data for 1994 and 1995 for those participants were obtained so as to provide a two-year "look-back" period for the earliest participants. Longitudinal variables in the annual files are named according to the month and year. For example, the generic variable name DUEDyymm represents "SSDI Benefit Payment Due" while DUED9805 is the specific variable name for "SSDI Benefit Payment Due – 1998 May". Some longitudinal items were not available for the early years and therefore these variables do not exist on the early annual files. One such example is EARNyymm; as it is available only from March 1996 onwards there are no EARNyymm variables in the 1994 and 1995 annual files. If data are not available for a given participant in a given time period, then data are missing for those months. To illustrate, if a beneficiary entered the system in June 1999, all variables for that beneficiary from January 1994 to May 1999 are left blank. If a beneficiary moves on and off the rolls, the longitudinal variables generally have missing values for the "off" months.

3. TRF.TKT

The third major component contains data related to the administration of the Ticket program on SSI and SSDI participants who participated in the Ticket program any time from January 2002 to

December 2010. There are 18,550,707 records, fewer than the number on TRF.DEMO, as the Ticket program did not begin until January 2002. Use COSSN on the TKT records to link with other TRF records.

TKT variables contain both onetime and event-based data. Onetime data includes variables like EVER_ACTIVE, which indicates whether a beneficiary has ever assigned their Ticket. Event-based data includes variables like TKTMAILDDTn, which indicates the date of Ticket mailing up to 30 occurences. This component also contains annual sets of monthly flags constructed by Mathematica to indicate such actions as whether a beneficiary has assigned their Ticket in a specific month. Thie TRF.TKT component is split into several files. The first is known as the Ticket Base, and includes all the variables gathered from SSA administrative data such as Ticket mailing and assignment dates. The other files contain the annual sets of monthly flags, with one file for each year from 2002 to 2010.

4. TRF.Payments

The fourth component contains data related to payments to Employment Networks (ENs). The payments are made for services provided to SSI or SSDI beneficiaries who assigned their Ticket to an EN under the Milestone-Outcome or Outcome-Only payment systems. The file includes information on payments made to ENs between October 2002 and December 2010. Records of payments under the traditional payment system are not included as they are not available from SSA administrative data for inclusion in the TRF.

The data in the TRF payments component are derived from the cumulative Payments file made available to SSA each month; individual payment records made to an EN on behalf of SSDI or SSI beneficiaries are rolled up into a single record per beneficiary. This component includes 17,409 person-level observations for beneficiaries who received a TRF payment. A record is included for a beneficiary only if SSA has made at least one milestone or outcome payment to a provider on behalf of the beneficiary.

Variables contain information about each beneficiary, including SSN, the amount of payments made to the EN for that beneficiary, the type of payment, the event that triggered the payment, the payment date, and the type of payment method, i.e. Milestones or Outcomes. Variables are named according to the month in which the payment event occurred. For example, the generic variable name M_PYMTyymm represents "Milestone payment amount" while M_PYMT0702 is the specific variable name for "Milestone payment amount – 2007 February". The name of the EN and the state in which it operates are also included. Use SSN to join to records in TRF.DEMO.

As the Ticket to Work program did not begin until January 2002, there are records for beneficiaries in TRF.DEMO with no counterpart in TRF.Payments. For instance, a beneficiary who began participation in SSDI in March 1997 but left the program in April 2001 will have a record in TRF.DEMO, but could not have a record in TRF.Payments.

5. Linkable Data Files

There are a number of TRF-linkable data files, also available on the SSA mainframe. In some cases SSN's in these files have been replaced with de-identified PINs. These linkable files are:

- **DER:** the Detail Earnings Record, an SSA file of annual earnings based on W-2 information collected by the IRS.
- **RSA:** contains data from the Department of Education's Rehabilitation Services Administration and contains records of demographic and programmatic data for each person who exited RSA's Vocational Rehabilitation (VR) program between 1998 to 2010.
- **VRRMS:** contains data from SSA's Vocational Rehabilitation Reimbursement Management System (VRRMS) regarding Cost Reimbursement payments to State Vocational Rehabilitation Agencies (SVRAs).

a. Detail Earnings Records (DER) Extract

Note: Use of this data is available only to selected staff at SSA.

The DER is a file containing detailed earnings based on W-2 information collected by the IRS. The DER extract for TRF contains data from the DER for TRF beneficiaries and contains variables

representing earnings between 1990 and the most recent TRF year. There is one record per SSN. *See Appendix Q, "File Layout of the DER file" for the layout of this source file.*

b. RSA

Note: permission from the Department of Education is required before using the RSA data.

This data originates with the Department of Education's Rehabilitation Services Administration (RSA). The file from which the linkable data is drawn is known as the RSA Case Service Report, also known as the RSA-911 files, with one file for each fiscal year. Each annual RSA-911 file contains records of demographic and programmatic data for each person who was enrolled in RSA's Vocatioanal Rehabilitation (VR) program and exited that program during a given fiscal year. The linkable RSA file for TRF contains selected data elements from each annual RSA-911 file from 1998 to 2010, rolled up to a single record per SSN. Records are included only for participants who are common to both the RSA and TRF files for the time span 1998 to 2010. Data elements include information such as program entry and exit dates and reason for service closure. As the average length of enrollment in the VR program is two years, the file has what amounts to a built in two year lag. For example, if a participant entered the VR program in 2004 and exited in 2006, their participation information would be included only in the 2006 file. There would be no record of their participation in VR in either the 2004 or 2005 files. There is one record per SSN. Data for beneficiaries with multiple spells of VR enrollment are combined into the single person-level record. Instructions for using the file are presented in Chapter IV, Section D.1 "Using the RSA Linkable File with TRF Components".

c. VRRMS

This file originates from SSA's Vocational Rehabilitation Reimbursement Management System (VRRMS) and contains information related to traditional Cost Reimbursement payments to State Vocational Rehabilitation Agencies (SVRAs). More specifically, it contains data on Vocational Rehability (VR) requests for payment for SSA beneficiaries who have received VR services with

closed cases where the VR agency believes the beneficiary has worked at substantial gainful activity (SGA) levels for 9 months within a 12-month period. Multiple spells of VR service are rolled up into a single record per beneficiary (most beneficiaries have only a single spell). Selected variables are extracted from the VRRMS file and summed across service spells. Data elements include information such as claimed and allowed payment amounts. Instructions for using the file are presented in Chapter IV, Section D.3, "Using the VRRMS Linkable File with TRF Components".

C. Administrative Data Sources

The following administrative files are used to build the TRF. Some files contain information particular to either the SSI or the SSDI program, e.g. the SSR and the MBR, while other files contain information for both types of participants, e.g. the DCF and the 831 & 832/833 files. A list of sources for each variable is included at the end of this chapter. Detailed layouts of each administrative file used are provided separately as appendices to this guide.

1. MBR: Master Beneficiary Record

The Master Beneficiary Record (MBR) is the main file for administering Old Age and Survivor's Insurance (OASI) and Social Security Disability Insurance (SSDI) payments. Each record is filed under a Claim Account Number (CAN), which is the SSN of the worker whose earnings serve as the basis for the benefit entitlement, and contains a combination of longitudinal and current data. Custom extracts can be created upon request and made available in pre-defined formats. ***See Appendix E, "File Layout of the MBR: Master Beneficiary Record" for the layout of this source file.***

2. SSR: Supplemental Security Record

The Supplemental Security Record (SSR) is the main file for administering the SSI program.. Records are filed under the Housed Under Number (HUN), which is the SSN of the first eligible person in the household unit, and contains a combination of longitudinal and current data. Extracts can be created upon request and made available in several formats. All versions of the TRF were

built using extracts based on the Longitudinal Record Format (LRF). ***See Appendix F, "File Layout of the SSR: Supplemental Security Record" for the layout of this source file.***

3. SSR Extract: SSI Address File

The SSR Household Address Format is another extract format from the SSR file, containing mailing and residence address data, as well as a limited number of other variables. ***See Appendix G, "File Layout of the SSR Extract: SSI Address File" for the layout of this source file.***

4. NUMIDENT: Number Identification

The Master File of Social Security Number Holders and Applications, better known as the Number Identification (Numident) file, contains records of applications for original and replacement Social Security cards, including name, SSN, date and place of birth and death, and other demographic information. Records are initiated by Social Security card applications; record updates, such as with date of death, may come from many sources. There is one record for every SSN ever issued, totaling several hundred million records. Each record contains multiple entries for changes or additions such as a change of name. ***See Appendix H, "File Layout of the Numident: Number Identification File" for the layout of this source file.***

5. 831 & 832/833 Disability Files

The 831 file contains data on decisions made by the Disability Determination Services (DDS), as reported on the SSA-831 disability determination form. Subsequent decisions or corrections to earlier decisions are added as new records to the file. The 832/833 file is based on forms SSA-832 and SSA-833 and it is used to record determinations of continuation or cessation of disabilities. Yearly files for 831 and 832/833 data are available back to 1988. ***See Appendix I, "File Layout of the 831 & 832/833 Disability Files" for the layout of these source files.***

6. DCF: Disability Control File

The DCF contains a record for every beneficiary who has ever filed for or received a Social Security or Supplemental Security Income disability benefit and replaces the former Continuing

Disability Review Control File (CDRCF). At the time of the conversion, the CDRCF contained CDR records for all current and former SSI beneficiaries and Ticket to Work records for all Social Security and SSI beneficiaries who had been selected to receive a Ticket. The conversion process screened the entire MBR and SSR to identify all former disability beneficiaries, all denied disability applicants, and any SSDI beneficiaries who had not been selected to receive a Ticket, then created a DCF record for each.

Extracts are made on a quarterly basis and correspond to various groups of data such as SSDI medical data, SSI medical data, and Ticket-to-Work data. Each extract file contains most of the variables pertinent to each data group, with the exception of variables containing free-form narrative text. *See Appendix J, "File Layout of the DCF: Disability Control File" for the layout of this source file.*

7. Monthly Snapshot Files

The SSI monthly extracts currently in use are known as the CER100% Field files. These files provide a snapshot of the beneficiaries participating in the SSI program during a given month. For TRF10, CER100% Field files from January 2010 to December 2010 were used.

The SSDI monthly extracts currently in use are known as the DBAD files. The DBAD files provide a snapshot of the beneficiaries participating in the SSDI program during a given month. For TRF10, DBAD files from January 2010 to December 2010 were used. *See Appendix K, "File Layout of the Monthly CER 100% Field Files" and Appendix L, "File Layout of the Monthly DBAD Files" for the layout of these source files.*

8. PHUS: Payment History Update System

This file captures benefit payment information for the purpose of taxing Social Security benefits (they became subject to taxation in 1984). While the MBR file reflects payment and entitlement information, the PHUS reflects the actual disbursement date and amount. Although the data are physically housed at the end of an MBR record, the PHUS is logically a distinct database, with

payment history stored as events. Extracts are requested via the MBR extract process. The PHUS has one record for each CAN, with individuals identified by CAN-BIC combinations. For some types of payments made to working beneficiaries, data are not available prior to January 1996. ***See Appendix M, "File Layout of the PHUS: Payment History Update System" for the layout of this source file.***

9. Payments Data

The Office of Employment Support Programs (OESP) currently uses a database external to SSA to evaluate EN payments. This database is maintained by MAXIMUS, Inc. through the MAXSTAR application owned by MAXIMUS, Inc. The payments component of the TRF is constructed using the Cumulative Payment Report by EN provided by MAXIMUS. ***See Appendix N, "File Layout of the EN Payments File" for the layout of this source file.***

10. RSA-911 Files

This RSA-911 data originates with the Department of Education's Rehabilitation Services Administration (RSA) and is known as the RSA Case Service Report. Each annual RSA-911 file contains records of demographic and programmatic data for each person who was enrolled in RSA's Vocational Rehabilitation (VR) program and exited that program during a given fiscal year. Data elements include information such as program entry and exit dates and reason for service closure. As the average length of enrollment in the VR program is two years, each RSA-911 file has what amounts to a built in two year lag. For example, if a participant entered the VR program in 2004 and exited in 2006, their participation information would be included only in the 2006 file. There would be no record of their participation in VR in either the 2004 or 2005 files. ***See Appendix O, "File Layout of the RSA-911 Files" for the layout of these source files.***

11. DER File

The DER is SSA's file of detail annual earnings onwards and based on W-2 information collected by the IRS. ***See Appendix Q, "File Layout of the DER File" for the layout of this file.***

12. VRRMS Files

This file originates from SSA's Vocational Rehabilitation Reimbursement Management System (VRRMS) and contains information related to traditional Cost Reimbursement payments to State Vocational Rehabilitation Agencies (SVRAs). More specifically, it contains data on Vocational Rehability (VR) requests for payment for SSA beneficiaries who have received VR services with closed cases where the VR agency believes the beneficiary has worked at substantial gainful activity (SGA) levels for 9 months within a 12-month period. *See Appendix P, "File Layout of the VRRMS Files" for the layout of these source files.*

13. Sources for TRF Variables

Variable Name	Data Source	SAS Label
AGE18_CDR	831 & 832/833	Indicator for Adult Redetermination
AGE18REDDT	831 & 832/833	Age 18 Redetermination Date
ALXyymm	831 & 832/833	Adjudicative Level (yymm = year/month)
DECn	831 & 832/833	T16 Result of Determination (n=1-23)
DODECn	831 & 832/833	Date of Decision (SSA or DDS) (n = 1-40)
DPMn	831 & 832/833	Permanent Disability Code Entry (n=1-47)
DX1Xyymm	831 & 832/833	Primary Disabling Condition, Monthly (yymm = year/month)
DX2Xyymm	831 & 832/833	Secondary Disabling Condition (yymm = year/month)
EDXyymm	831 & 832/833	Education Level (yymm = year/month)
FRST_DODEC	831 & 832/833	First Adjudication Date
FRST_MIE	831 & 832/833	Date MIE First Flagged
JUDLVLn	831 & 832/833	Level of Adjudication (n=1-47)
LAST_DODEC	831 & 832/833	Last Adjudication Date
MIE_BEFORE_CDR	831 & 832/833	MIE Before First CDR
MIEXyymm	831 & 832/833	Medical Improvement Indicator (yymm = year/month)
RBn	831 & 832/833	Regulation Basis Code (n = 1-47)
RDTn	831 & 832/833	Result of Determination (n= 1- 47)
RIDn	831 & 832/833	Program Identification (n=1-47)
T16APPLn	831 & 832/833	T16 Appeal Date (n=1-24)
T16RIDn	831 & 832/833	T16 Program Identification (n=1-27)
T16STARTn	831 & 832/833	T16 Benefit Entitlement Date (n=1-27)
T16STOPn	831 & 832/833	T16 Benefit Cessation Date (n=1-27)
CITIZEN	CER100% Field File	US Citizenship Indicator
CNTYyymm	CER100% Field File	T16 County of Residence, FIPS Code (yymm = year/month)
DOBREM	CER100% Field File	Date of Birth - From CER100% Field File
EARNyymm	CER100% Field File	Earned Income (yymm = year/month)
EINDyymm	CER100% Field File	Employment Indicator (yymm = year/month)
ERP_IND	CER100% Field File	Economic Recovery Indicator May 09
IEA1yymm	CER100% Field File	Earned Income Blind (yymm = year/month)
IEA2yymm	CER100% Field File	Earned Income PASS (yymm = year/month)
IEA3yymm	CER100% Field File	Earned Income Net Loss (yymm = year/month)
IEA4yymm	CER100% Field File	Earned Income Amount From Self-Employment (yymm = year/month)
IEA5yymm	CER100% Field File	Income IRWE (yymm = year/month)

Variable Name	Data Source	SAS Label
IEA6yymm	CER100% Field File	Earned Income Amount From Wages (yymm = year/month)
IET1yymm	CER100% Field File	Earned Income Type Blind (yymm = year/month)
IET2yymm	CER100% Field File	Earned Income Type PASS (yymm = year/month)
IET3yymm	CER100% Field File	Earned Income Type Net Loss (yymm = year/month)
IET4yymm	CER100% Field File	Earned Income Type Self-Employed (yymm = year/month)
IET5yymm	CER100% Field File	Earned Income Type IRWE (yymm = year/month)
IET6yymm	CER100% Field File	Earned Income TYPE Wages (yymm = year/month)
IINDyymm	CER100% Field File	IRWE Indicator (yymm = year/month)
IUA1yymm	CER100% Field File	Unearned Income Amount, SSDI (yymm = year/month)
IUA3yymm	CER100% Field File	Unearned Income Amount, Workers' Compensation (yymm = year/month)
IUA6yymm	CER100% Field File	Unearned Income Amount, TANF (yymm = year/month)
MEDCyymm	CER100% Field File	Medicaid Eligibility Code (yymm = year/month)
MEDEyymm	CER100% Field File	Medicaid Eligibility (yymm = year/month)
MTSTyymm	CER100% Field File	Medical and Social Service Income Test (yymm = year/month)
PINDyymm	CER100% Field File	PASS Indicator (yymm = year/month)
REMDIG1	CER100% Field File	CER100% Field File Primary 4-Digit Diagnosis
SGAyymm	CER100% Field File	SGA Flag (yymm = year/month)
SINDyymm	CER100% Field File	Self-Employment Indicator (yymm = year/month)
STyymm	CER100% Field File	T16 State of Residence, FIPS Code (yymm = year/month)
ZIPyymm	DBAD/ZIP	T2 Zip Code (yymm = year/month)
PSTyymm	DBAD/ZIP, CER100% Field file	T2 and T16 - State Postal Code (yymm = year/month)
ACTIVE_EVyymm	DCF	Ever Assigned Ticket as of Current Month (yymm=0201 and up)
ACTIVE_MOyymm	DCF	Ticket Active (Assigned) in Current Month (yymm=0201 and up)
ALLGAMTyymm	DCF	Earnings Alleged Amt (yymm= year/month)
BLINDDT	DCF	Date of Blindness Onset
DEACTIVE_EN_MOyymm	DCF	Ticket Unassigned From EN in Current Month (yymm=0201 and up)
DEACTIVE_MOyymm	DCF	Ticket Unassigned in Current Month (yymm=0201 and up)
DEACTIVE_VR_MOyymm	DCF	Ticket Unassigned From SVRA in Current Month (yymm=0201 and up)
DOBTKT	DCF	Date of Birth on TKT File
DODTKT	DCF	Date of Death
ELIGIBLE_EVyymm	DCF	Ever Eligible for a Ticket as of Current Month (yymm=0201 and up)
ELIGIBLE_MOyymm	DCF	Eligible for a Ticket in Current Month (yymm=0201 and up)
EN_EVyymm	DCF	Ever Assigned Ticket to EN as of Current Month (yymm=0201 and up)
EVER_ACTIVE	DCF	Ticket Ever Assigned as of December of TRF Year
EVER_ELIG	DCF	Ever Eligible as of December of TRF Year
EVER_EN	DCF	Ever Assigned Ticket to EN as of December of TRF Year
EVER_VR	DCF	Ever Assigned Ticket to SVRA as of December of TRF Year
INUSE_MOyymm	DCF	Ticket In-Use (yymm = year/month)
MAIL_MOyymm	DCF	Ticket Mailed in Calendar Month (yymm=0201 and up)
MINMAIL	DCF	First Ticket Mail Date

Variable Name	Data Source	SAS Label
NOE	DCF	Ticket Number of Entries (1-30)
PMTTYPE_MOyymm	DCF	Payment Type for Active Ticket in Current Month (yymm=0201 and up)
PMTTYPEn	DCF	Payment Type (n=1-30)
REASSIGN_MOyymm	DCF	Ticket Re-Assigned in Current Month (yymm=0201 and up)
T16EXLAMTyymm	DCF	T16 Student Exclusion Amt (yymm = year/month)
T16EXPAMTyymm	DCF	T16 Work Expense Amt (yymm = year/month)
T16GRSAMTyymm	DCF	T16 Earnings Gross Amt (yymm = year/month)
T16NETAMTyymm	DCF	T16 Self-Employment Net Income Amt (yymm = year/month)
T16PASAMTyymm	DCF	T16 PASS Amt (yymm = year/month)
T16SEVERINDyymm	DCF	T16 Self-Employment Earnings Verified Switch (yymm = year/month)
T16VERINDyymm	DCF	T16 Gross Earnings Amount Verified Switch (yymm = year/month)
T2CDNAMTyymm	DCF	T2 Special Condition Amt (yymm = year/month)
T2EXPAMTyymm	DCF	T2 Work Expense Amt (yymm = year/month)
T2FRAUDVERyymm	DCF	T2 Fraud Verified Switch (yymm=year/month)
T2GRSAMTyymm	DCF	T2 Earnings Gross Amt (yymm = year/month)
T2NETAMTyymm	DCF	T2 Self-Employment Net Income Amt (yymm = year/month)
T2SBDYAMTyymm	DCF	T2 Earnings Subsidy Amt (yymm = year/month)
T2SEHRSyymm	DCF	T2 Self-Employment Hours (yymm = year/month)
T2SEVERINDyymm	DCF	T2 Self-Employment Earnings Verified Switch (yymm = year/month)
T2UBEAMTyymm	DCF	T2 Self-Employment Unpaid Business Exp Amt (yymm = year/month)
T2VERINDyymm	DCF	T2 Gross Earnings Amount Verified Switch (yymm = year/month)
TITLE_MOyymm	DCF	Ticket Title (program) in Current Month (yymm=0201 and up)
TKTASGNDDTn	DCF	Ticket Assignment Date (n=1-30)
TKTMAILDDTn	DCF	Ticket Mail Date (n=1-30)
TKTTERMDDTn	DCF	Ticket Termination Date (n=1-30)
TKTUNASGDTn	DCF	Ticket Unassignment Date (n=1-30)
TRF05	DCF	Indicator for Ticket Data in Each File Version
TRF06	DCF	Indicator for Ticket Data in Each File Version
TRF07	DCF	Indicator for Ticket Data in Each File Version
TRF08	DCF	Indicator for Ticket Data in Each File Version
TRF09	DCF	Indicator for Ticket Data in Each File Version
TRF1	DCF	Indicator for Ticket Data in Each File Version
TRF10	DCF	Indicator for Ticket Data in Each File Version
TRF2	DCF	Indicator for Ticket Data in Each File Version
TWPCMPLMNTHn	DCF	TWP Completion Month (n=1-5)
TWPDATAyymm	DCF	T2 Trial Work Period Data (yymm = year/month)
EN_MO_EVyymm	DCF, Provider	Ever Assigned Ticket to EN-MO as of Current Month (yymm=0201 and up)
EN_MO_MOyymm	DCF, Provider	Ticket Assigned to EN-MO in Current Month (yymm=0201 and up)
EN_OO_EVyymm	DCF, Provider	Ever Assigned Ticket to EN-OO as of Current Month (yymm=0201 and up)
EN_OO_MOyymm	DCF, Provider	Ticket Assigned to EN-OO in Current Month (yymm=0201 and up)
EVER_EN_MO	DCF, Provider	Ever Assigned Ticket Under the Milestones + Outcomes Payment System as of December of TRF Year
EVER_EN_OO	DCF, Provider	Ever Assigned Ticket to EN:OO as of December of TRF Year

Variable Name	Data Source	SAS Label
EVER_VR_MO	DCF, Provider	Ever Assigned Ticket to SVRA:MO as of December of TRF Year
EVER_VR_OO	DCF, Provider	Ever Assigned Ticket to SVRA:OO as of December of TRF Year
EVER_VR_TR	DCF, Provider	Ever Assigned Ticket to SVRA:TR as of December of TRF Year
FIRST_ASGN_EN_MOyymm	DCF, Provider	Ticket First Assigned to EN in Current Month (yymm=0201 and up)
FIRST_ASGN_MOyymm	DCF, Provider	Ticket First Assigned in Current Month (yymm=0201 and up)
FIRST_ASGN_VR_MOyymm	DCF, Provider	Ticket First Assigned to SVRA in Current Month (yymm=0201 and up)
PROVTYPE_MOyymm	DCF, Provider	Provider Type for Active Ticket in Current Month (yymm=0201 and up)
PROVTYPEn	DCF, Provider	Provider Type for Each Ticket (n=1-30)
REASSIGN_EN_MOyymm	DCF, Provider	Ticket Re-Assigned to EN as of Current Month (yymm=0201 and up)
REASSIGN_VR_MOyymm	DCF, Provider	Ticket Re-Assigned to SVRA as of Current Month (yymm=0201 and up)
VR_EVyymm	DCF, Provider	Ever Assigned Ticket to SVRA as of Current Month (yymm=0201 and up)
VR_MO_EVyymm	DCF, Provider	Ever Assigned Ticket to SVRA-MO as of Current Month (yymm=0201 and up)
VR_MO_MOyymm	DCF, Provider	Ticket Assigned to SVRA-MO in Current Month (yymm=0201 and up)
VR_OO_EVyymm	DCF, Provider	Ever Assigned Ticket to SVRA-OO as of Current Month (yymm=0201 and up)
VR_OO_MOyymm	DCF, Provider	Ticket Assigned to SVRA-OO in Current Month (yymm=0201 and up)
VR_TR_EVyymm	DCF, Provider	Ever Assigned Ticket to SVRA-TR as of Current Month (yymm=0201 and up)
VR_TR_MOyymm	DCF, Provider	Ticket Assigned to SVRA-TR in Current Month (yymm=0201 and up)
DODFLAG	DODBEST VARIABLE	January 1 Imputed for Death Date
DUNS_IDn	EN Payment Data	DUNS Identification Number (n=1-4)
EN_NAMEn	EN Payment Data	First, Second, Third, or Fourth EN Name (n=1-4)
HAS_M_DATA	EN Payment Data	Flag for Beneficiaries With Milestone Payments
HAS_O_DATA	EN Payment Data	Flag for Beneficiaries With Outcome Payments
M_DTPYyymm	EN Payment Data	Date Payment (yymm = year/month)
M_PYMTyymm	EN Payment Data	Payment Amount (yymm = year/month)
M_PYNMyymm	EN Payment Data	Payment Number (yymm = year/month)
M_TRIGGEREDyymm	EN Payment Data	Triggered By (yymm = year/month)
M_TYPNUMyymm	EN Payment Data	M Type Payment (yymm = year/month)
M_TYPYyymm	EN Payment Data	Type Payment (yymm = year/month)
O_DTPYyymm	EN Payment Data	Date Payment (yymm = year/month)
O_PYMTyymm	EN Payment Data	Payment Amount (yymm = year/month)
O_PYNMyymm	EN Payment Data	Payment Number (yymm = year/month)
O_TRIGGEREDyymm	EN Payment Data	Triggered By (yymm = year/month)
O_TYPNUMyymm	EN Payment Data	O Type Payment Number
O_TYPYyymm	EN Payment Data	Type Payment (yymm = year/month)
BDOE_STARTn	MBR	Beneficiary Date of Entitlement Start
BDOE_TERMn	MBR	Beneficiary Date of Entitlement Termination
HBICn	MBR	Historical Beneficiary Identification Code
ADCD	MBR extract	Dual Elig-Applicant Disab Cessation Date-Supplementary Record
ADCn	MBR extract	T2 Applicant's Disability Cessation Date (n = 1-12)
APSD	MBR extract	Dual Elig-Appeals Date- Supplementary Record
APSn	MBR extract	T2 Appeals Date (n=1-12)
BDCD	MBR extract	Dual Elig-Basis for Denial Code-Supplementary Record

Variable Name	Data Source	SAS Label
BDCn	MBR extract	Basis for Denial Code T2 (n=1-12)
BDOD	MBR extract	MBR Date of Death
BDOFn	MBR extract	Beneficiary Date of Filing Entry (n=1-15)
BGN	MBR extract	Beneficiary Given Name
BIC	MBR extract	Beneficiary Identification Code
BLN	MBR extract	Beneficiary Last Name
BMI	MBR extract	Beneficiary Middle Initial
BPDyymm	MBR extract	T2 Benefit Payment Designation (yymm = year/month)
CAN	MBR extract	Claim Account Number
CDRD	MBR extract	Dual Elig-T2 Disability Cessation Reason-Supplementary Record
CDRn	MBR extract	T2 Disability Cessation Reason (n=1-12)
CDRyymm	MBR extract	T2 Cessation of Disability Reason (yymm = year/month)
CEC	MBR extract	DI Current Entitlement Code
COUNTY	MBR extract	T2 SSA County Code for Residence
CSAD	MBR extract	Dual Elig-Current SGA Status-Supplementary Record
CSAn	MBR extract	T2 Current SGA Activity (n=1-12)
DACD	MBR extract	Dual Elig-Disability Award Code-Supplementary Record
DACn	MBR extract	T2 Disability Award Code (n=1-12)
DDBCD	MBR extract	Dual Elig-Date Of Benefit Cessation-Supplementary Record
DDBCn	MBR extract	T2 Disability Cessation Date (n=1-12)
DDOD	MBR extract	Dual Elig-Date Of Disability Onset-Supplementary Record
DDOn	MBR extract	T2 Date of Disability Onset (n=1-12)
DIGD	MBR extract	Dual Elig-Primary Diagnosis-Supplementary Record
DIGn	MBR extract	T2 Primary Diagnosis (n=1-12)
DOBMBR	MBR extract	T2 Date of Birth - From MBR
DOEC	MBR extract	Date of Current SSDI Entitlement
DOECD	MBR extract	Dual Elig-Date of Current SSDI Entitlement-Supplementary Record
DOEI	MBR extract	Date of Initial SSDI Entitlement
DOEID	MBR extract	Dual Elig-Date of Initial Elig-Supplementary Record
DOST	MBR extract	Date of Suspension or Termination
DPENyymm	MBR extract	Number of Dependents (yymm = year/month)
DSDD	MBR extract	Dual Elig-Adjudication Date-Supplementary Record
DSDn	MBR extract	T2 Disability Adjudication Date (n=1-12)
DUALELIG	MBR extract	Flag for Dual Eligible Beneficiary
DUEDyymm	MBR extract	SSDI Benefit Due (yymm = year/month)
DUEOyymm	MBR extract	SSDI Dependent Benefit Due (yymm = year/month)
EBDD	MBR extract	Dual Elig-EPE Begin Date
EBDn	MBR extract	EPE Begin Date (n=1-12)
ENTDATD	MBR extract	Dual Elig-Date of Entitlement
ENTDATn	MBR extract	Date of Entitlement to SSDI (n=1-12)
HDDD	MBR extract	Dual Elig-Hearing Decision Date
HDDn	MBR extract	T2 Hearing Decision Date (n=1-12)
HI_START	MBR extract	Start Date for Hospital Insurance (HI)
HI_TERM	MBR extract	End Date for Hospital Insurance (HI)
IMEn	MBR extract	Indexed Monthly Earnings (n= 1-50)
LAF	MBR extract	Ledger Account File Status, Most Recent
LAFyymm	MBR extract	Ledger Account File Status (yymm = year/month)
LANG	MBR extract	MBR Written Language Indicator

Variable Name	Data Source	SAS Label
LDWDIyymm	MBR extract	T2 - Suspense or Termination Due to Work (yymm = year/month)
LODD	MBR extract	Dual Elig-Level of Denial Code
LODn	MBR extract	T2 Level of Denial Code (n=1-12)
LSAP	MBR extract	DI Lump Sum Award Amount
LSDC	MBR extract	DI Lump Sum Disallowance Code
LSFD	MBR extract	DI Lump Sum Filing Date
LSPA	MBR extract	DI Lump Sum Payment Amount
LSSC_AUTPMT	MBR extract	DI Lump Sum Code-Authorized Payment
LSSC_BURL	MBR extract	DI Lump Sum Code-Burial Expense
LSSC_CHLD	MBR extract	DI Lump Sum Code-Entitled Child
LSSC_DSALLW	MBR extract	DI Lump Sum Code-Claimant Disallowed
LSSC_FUNR	MBR extract	DI Lump Sum Code-Funeral Home
LSSC_LVSPS	MBR extract	DI Lump Sum Code-Living With Spouse
LSSC_WID	MBR extract	DI Lump Sum Code-Entitled Widow
MBAyymm	MBR extract	Federal SSDI Benefit Due (yymm = year/month)
MBPyymm	MBR extract	Federal SSDI Benefit Paid (yymm = year/month)
MBRDIG1	MBR extract	T2 Primary Diagnosis
MBRDIG2	MBR extract	T2 Secondary Diagnosis
MEDRyymm	MBR extract	Medicare Eligibility (yymm = year/month)
NDOF	MBR extract	Number of Date of Filing Fields
NODF	MBR extract	Number of MBR Disability Fields
NPIA	MBR extract	Number of MBR PIA Entries
PIAn	MBR extract	T2 Primary Insurance Amount (n=1-50)
PIARFCn	MBR extract	T2 Reason for Change in PIA (n=1-50)
PIEDn	MBR extract	T2 PIA Effective Date (n=1-50)
PNOB	MBR extract	Number of Beneficiaries in Payment
RDD	MBR extract	Reason for Disallowance or Denial
REPPYSSD	MBR extract	Representative Payee Indicator - T2
RFDyymm	MBR extract	T2 Reason for Deduction (yymm = year/month)
RFSTyymm	MBR extract	Reason for Suspension or Termination (yymm = year/month)
RP	MBR extract	Race
RZIP	MBR extract	T2 Residence ZIP Code
SDIGD	MBR extract	Dual Elig-Secondary Diagnosis-Supplementary Record
SDIGn	MBR extract	T2 Secondary Diagnosis (n=1-12)
SDSD	MBR extract	Dual Elig-SGA Disability Cessation Date
SDSn	MBR extract	T2 SGA Disability Cessation (n=1-12)
SEXMISS	MBR extract	Indicator for Missing Sex Data
SIFT	MBR extract	Security Income File Type
SISC	MBR extract	SSI Income Status Code
SLAC	MBR extract	SSI Living Arrangement Code
SMI_STAR	MBR extract	Start Date for Supplemental Medical Insurance (SMI)
SMI_TERM	MBR extract	End Date for Supplemental Medical Insurance (SMI)
STATE	MBR extract	T2 SSA State Code for Residence
TAC	MBR extract	Type Of Award Code
TERMSSD	MBR extract	Terminated T2 in the Year for This Annual file
TOC_NUM	MBR extract	T2 Number of TOC Occurrences
TOC_STARTn	MBR extract	T2 TOC START Date (n=1-20)
TOCn	MBR extract	Type of Claim (n=1-20)
TOP	MBR extract	Type of Payee
TSSDyymm	MBR extract	Terminated Status - T2 (yymm = year/month)
WICyymm	MBR extract	T2 Work indication code (yymm = year/month)
DOBBEST	MBR extract, Numident, CER100% Field file, SSI_LF	Best Birth Date

Variable Name	Data Source	SAS Label
DOBFLAG	MBR extract, Numident, CER100% Field file, SSI_LF	January 1 Imputed for Birth Date
FRA	MBR extract, Numident, CER100% Field file, SSI_LF	Beneficiary's Full Retirement Age
DOC	MBR extract, SSI-LF	District Office Code
LDWCMyymm	MBR extract, SSI-LF	Combined Left Due to Work Indicator (yymm = year/month)
CONCyymm	MBR extract, SSI_LF	Concurrent Beneficiary Status (yymm = year/month)
SSN	Most SSA admin. files used as Sources of TRF data	Social Security Number
ASIAN	NUMIDENT	Asian Indicator
BLACK	NUMIDENT	African-American Indicator
DOBNUM	NUMIDENT	Numident Date of Birth
DOD	NUMIDENT	Date of Death
FRSTNAME	NUMIDENT	Numident Beneficiary First Name
HISPANIC	NUMIDENT	Hispanic Indicator
LASTNAME	NUMIDENT	Numident Beneficiary Last Name
NAINDIAN	NUMIDENT	Native American Indicator
NAMESUFX	NUMIDENT	Numident Beneficiary Name Suffix
OTHER	NUMIDENT	Other Race Indicator
RACE	NUMIDENT	Race or Ethnicity
RACEMISS	NUMIDENT	Missing or Unknown Race
UNKNOWN	NUMIDENT	Unknown Race Indicator
WHITE	NUMIDENT	White Indicator
MALE	NUMIDENT,MBR extract, SSI-LF, CER100% Field file	Male Indicator
SEX	NUMIDENT,MBR extract, SSI-LF, CER100% Field file	Sex
DIED	NUMIDENT, SSI-LF	Indicator Died Before 1995
DODBEST	NUMIDENT, MBR extract, SSI-LF	Best Death Date
DIRPAYyymm	PHUS	PHUS Direct Pay (yymm = year/month)
MEDPREMyymm	PHUS	PHUS Medicare Premium (yymm = year/month)
PAYDyymm	PHUS	PHUS SSDI Benefit Paid (yymm = year/month)
PAYOyymm	PHUS	PHUS SSDI Dependent Benefit Paid (yymm = year/month)
_8080_JD	SSI-LF	Initial Decision Date
APP_RD	SSI-LF	T16 Application Date (Current)
CLM_FIL	SSI-LF	T16 Date Claim Filed
COMP_STA	SSI-LF	T16 Status Type of Action
CURSTAT	SSI-LF	T16 Current Payment Status
DEATH_JD	SSI-LF	T16 Death Date
DIB_DIG	SSI-LF	Primary 4-digit Diagnosis
DIB_DIG2	SSI-LF	Secondary 4-digit Diagnosis
DIB_DPM	SSI-LF	T16 Permanent Disability Indicator
DIB_MDR	SSI-LF	Medical Diary Reason
DISPAYCD	SSI-LF	T16 Disability Payment Code
DOBLONG	SSI-LF	T16 Date of Birth - From SSR
DUESyymm	SSI-LF	SSI Benefit Due (yymm = year/month)
EICMyymm	SSI-LF	Countable Earned Income (yymm = year/month)
ELG_RD	SSI-LF	T16 Date of Current Eligibility
FACLyymm	SSI-LF	Lives in Medical Facility Indicator (yymm = year/month)
FAMTyymm	SSI-LF	Federal SSI Benefit Due (yymm = year/month)
FIRST_PA	SSI-LF	T16 First Payment Date for This Record
FPMTyymm	SSI-LF	Federal SSI Benefit Paid (yymm = year/month)
HUN	SSI-LF	SSI Housed Under Number

Variable Name	Data Source	SAS Label
LDWSSIyymm	SSI-LF	T16 - Suspense or Termination Due to Work (yymm = year/month)
LIVFyymm	SSI-LF	Living Arrangement Code (yymm = year/month)
LONEyymm	SSI-LF	Lives in Own Household Indicator (yymm = year/month)
MAX_80JD	SSI-LF	T16 Latest Decision Date
MAXAPPRD	SSI-LF	T16 Latest Application Date
MAXCLMFL	SSI-LF	T16 Latest Application Receipt Date
MAXELGRD	SSI-LF	T16 Latest SSI Eligibility Date
MAXFRSTP	SSI-LF	T16 Latest Application, First SSI Payment Date
MAXRCDST	SSI-LF	T16 Latest SSR Record Establishment Date
MAXSTPRD	SSI-LF	T16 Latest Application, Eligibility Period End Date
MAXSTRRD	SSI-LF	T16 Most Recent Start Date of SSI Payments
MFT	SSI-LF	T16 Master File Type
MIN_80JD	SSI-LF	T16 First Decision Date
MINAPPRD	SSI-LF	T16 First Application Date
MINCLMFL	SSI-LF	T16 First Application Receipt Date
MINELGRD	SSI-LF	T16 First SSI Eligibility Date
MINFRSTP	SSI-LF	T16 First Application, First SSI Payment Date
MINRCDST	SSI-LF	T16 First SSR Record Establishment Date
MINSTPRD	SSI-LF	T16 First Application Eligibility Period End Date
MINSTRRD	SSI-LF	T16 First Application Computation Date
OTHRyymm	SSI-LF	Lives w/ Other Recipient Indicator (yymm = year/month)
PAYSC_DEC10	SSI-LF	State Payment Indicator
PAYSyymm	SSI-LF	SSI Benefit Paid (yymm = year/month)
PDSCC	SSI-LF	T16 State & County Code, SSA Code
PDZIP	SSI-LF	T16 Payee Zip Code
PDZIP6_9	SSI-LF	T16 Payee Zip Suffix
PROAyymm	SSI-LF	Use of 1619a Provision (yymm = year/month)
PROByymm	SSI-LF	Use of 1619b Provision (yymm = year/month)
PSTAyymm	SSI-LF	Payment Status (yymm = year/month)
RCD_EST	SSI-LF	T16 Record Establishment Date
REPPAYTP	SSI-LF	T16 Type of Payee Code
REPPYSSI	SSI-LF	Representative Payee Indicator - T16
SAMTyymm	SSI-LF	State SSI Benefit Due (yymm = year/month)
SCONyymm	SSI-LF	State Concurrent Eligibility Indicator (yymm = year/month)
SPMTyymm	SSI-LF	State SSI Benefit Paid (yymm = year/month)
START_RD	SSI-LF	T16 Earliest Computation Date
STOP_RD	SSI-LF	T16 End Date for Eligibility Period
T16LANG	SSI-LF	T16 Language
TERMSSI	SSI-LF	Terminated T16 in the Year for This Annual file
TOA	SSI-LF	T16 Type of Action Code
TSSIyymm	SSI-LF	Terminated Status - T16 (yymm = year/month)
UINCyymm	SSI-LF	Countable Unearned Income (yymm = year/month)

D. Criteria for Selection

The TRF was initially constructed for an evaluation of TTW and, as noted above, includes information on the entire population eligible for SSI or SSDI under disability benefits and of working age at any point from 1996 onwards. In order to compare beneficiaries in the pre-Ticket

period (prior to Ticket roll-out in 2002) with beneficiaries in the post-Ticket period under the TTW evaluation, beneficiaries were selected as far back as 1996. The beneficiaries from the early years were selected if they would have been eligible for Ticket had the Ticket program actually been in existence at that time. Some beneficiaries from those early years were close to retirement age. Take, for example, a person who was 63 years old in 1996, eligible for SSDI benefits, and selected for inclusion in the TRF. A couple of years later that person will have turned 65 and converted to retirement benefits, but their data for 1996 through 1998 would still be in the TRF. Similarly, with the passage of time, some beneficiaries who were selected for inclusion in the TRF have since died, and their data are likewise still in the TRF.

For each TRF version, new beneficiaries were selected if they passed eligibility criteria during a specified year or range of months and were combined with the existing beneficiares from the previous TRF.[2] The combined beneficiaries (new and previous) were used to create a list of unique SSNs , known as a finder file, and given to SSA staff to extract records from the administrative data files. We used a wide range of pay status codes for both SSI and SSDI beneficiaries in order to select as many new beneficiaries as possible who might have been in current pay status at some time during their beneficiary history. If a beneficiary was in suspension in one month, he or she may have returned to full eligibility in a subsequent month.

Because the beneficiary selection critieria for age changed in developing the TRF, the available age range for earlier cohorts is more limited, especially for cohorts before 2005. Beginning in 2005,SSA lowered the age cutoff for selecting new SSI beneficiaries from 18 to 10 (for SSDI beneficiaries it remained at 18). This change did not affect beneficiary selection that had occurred previously in previous versions of the TRF. To clarify, for TRF1, beneficiaries were selected if they

[2] See Chapter V, Section B, "Development History" for the exact months used for selection of new beneficiaries for each TRF version.

were between age 18 and 65 between March 1996 and Aug 2003. Subsequently, new beneficiaries were also selected if they were between age 18 and 65 between September 2003 and September 2004, and were combined with the beneficiaries previously selected for TRF1. And finally in 2005, new SSDI beneficiaries were selected if they were between age 18 and 65 between October 2004 and December 2005 while new SSI beneficiaries were selected if they were between age 10 and 65 between October 2004 and December 2005, and these new beneficiaries were added to the beneficiaries previously selected cohorts. Later versions of the TRF continued to add new beneficiaries using the revised age criteria for new SSI beneficiaries, but the selection process was not re-done for the earlier TRF years. Therefore the earliest year for which TRF data exists for child SSI beneficiearies is January 2005.

Similalry, beginning with TRF07, the upper end of the age cutoff used in selecting new beneficiaries for inclusion in the TRF was increased to full retirement age, which varies according to each beneficiary's birth date. ***See Appendix A, "Calculating Retirement Date", for a description of the calculation of full retirement age.*** Later versions of the TRF continued to add new beneficiaries using the extended age criteria, but the selection process was not re-done for the earlier TRF years. Therefore the earliest year for which TRF data exists for beneficiaries over age 65 is 2007.

For the sake of precision, the selection criteria for the current version of the TRF are expressed below in their SAS code in addition to the text descriptions.

1. SSI Beneficiaries

Beneficiaries are selected if they meet the following conditions for a given month:

- are currently in active status or temporary suspended or non-pay status for the SSI program (if in non-pay status, benefits must not have been denied)
- have income below a specified level, are between 10 years old and the full retirement age, and are blind or disabled

These selection criteria are implemented with the following SAS code:

```
/* age */
IF 10 <= AGE < FRTRAGE; [3]

/* blind or disabled */
INCLUDE = 'N';
IF UPCASE(MFT) IN('DI' 'BI' 'DC' 'BC' 'DS' 'BS')
  THEN INCLUDE = 'Y';

/* active or suspended status */
ACT='N';
IF UPCASE(CPST) IN ('C01' 'E01' 'E02' 'M01' 'M02' 'P01' 'S05' 'S06' 'S07' 'S08' 'S09' 'S21'
'T30' 'T32' 'T33')
   THEN ACT = 'Y';

/* non-pay status */
IF DENCDE = ' '
  THEN DO;
     IF UPCASE(CPST) IN ('N01' 'N02' 'N04' 'N05' 'N06' 'N09' 'N20' 'N22' 'N33' 'N44'
'N54')
       THEN ACT = 'Y';
  END;

/* final selection */
 IF ACT = 'Y' AND INCLUDE = 'Y';
```

2. SSDI Beneficiaries

Beneficiaries are selected if they meet the following conditions for a given month:

- are a disabled and either a primary claimant, dependent adult child, or a widow(er)
- are between 18 years old and the full retirement age
- are currently in active or temporary deferred or suspended or status for the SSDI program
- have a non-blank SSN

These selection criteria are implemented with the following SAS code:

```
/* setup flags */
BICC = 'N';
LAFC = 'N';
```

[3] See paragraphs above that describe the timing of extending the TRF to include SSI children and to include all beneficiaries up to full retirement age.

```
/* disabled primary, DAC, or widow(er) */
IF SUBSTR(BIC,1,1) = 'A' AND TOC IN ('5' '6') OR
   SUBSTR(BIC,1,1) = 'C' AND TOC IN ('3' '4' '7') OR
   SUBSTR(BIC,1,1) = 'W'
       THEN BICC = 'Y';

/* status of DI participation – active or temporary deferral or suspension  */
 IF UPCASE(LAF) IN ('AD' 'AS' 'A9' 'C ' 'D ' 'DP' 'DW' 'E ' 'S ' 'SD'  'S0' 'S1' 'C2'  'S2'
'S6' 'S8')
       THEN LAFC = 'Y';

/* final selection age */
IF 18 <= AGE < FRTRAGE AND BICC = 'Y' AND LAFC = 'Y' AND SSN NE ' ';[4]
```

[4] See paragraph above that describes the timing of extending the TRF to include all beneficiaries up to full retirement age.

III. VARIABLES IN THE TRF DATABASE

A. List of New or Changed Variables in TRF10

1. Changed Variables in TRF10

TOCn – changed from a single-occurrence to multiple

LDWDIyymm – the construction methodology was updated

LDWSSIyymm – the construction methodology was updated

LDWCMyymm– the construction methodology was updated

2. Variables Deleted from TRF10

BENE_FIRST_NAME

BENE_LAST_NAME

PAYSC_DEC09

3. New Variables in TRF10

T2FRAUDOVERyymm

BDOE_STARTn

BDOE_TERMn

HBICn

PAYSC_DEC10

DUNS_IDn

DOBTKT

TRF10

B. Variables in the TRF DEMO Component

1. List of Variables in TRF10 Demo

Variable Name	SAS Label
_8080_JD	Initial Decision Date
ADCD	Dual Elig-Applicant Disab Cessation Date-Supplementary Record
ADCn	T2 Applicant's Disability Cessation Date (n = 1-12)
AGE18_CDR	Indicator for Adult Redetermination
AGE18REDDT	Age 18 Redetermination Date
APP_RD	T16 Application Date (Current)
APSD	Dual Elig-Appeals Date- Supplementary Record
APSn	T2 Appeals Date (n=1-12)
ASIAN	Asian Indicator
BDCD	Dual Elig-Basis for Denial Code-Supplementary Record
BDCn	Basis for Denial Code T2 (n=1-12)
BDOD	MBR Date of Death
BDOE_STARTn	Beneficiary Date of Entitlement Start
BDOE_TERMn	Beneficiary Date of Entitlement Termination
BDOFn	Beneficiary Date of Filing Entry (n=1-15)
BGN	Beneficiary Given Name
BIC	Beneficiary Identification Code
BLACK	African-American Indicator
BLINDDT	Date of Blindness Onset
BLN	Beneficiary Last Name
BMI	Beneficiary Middle Initial
CAN	Claim Account Number
CDRD	Dual Elig-T2 Disability Cessation Reason-Supplementary Record
CDRn	T2 Disability Cessation Reason (n=1-12)
CEC	DI Current Entitlement Code
CITIZEN	US Citizenship Indicator
CLM_FIL	T16 Date Claim Filed
COMP_STA	T16 Status Type of Action
COUNTY	T2 SSA County Code for Residence
CSAD	Dual Elig-Current SGA Status-Supplementary Record
CSAn	T2 Current SGA Activity (n=1-12)
CURSTAT	T16 Current Payment Status
DACD	Dual Elig-Disability Award Code-Supplementary Record
DACn	T2 Disability Award Code (n=1-12)
DDBCD	Dual Elig-Date Of Benefit Cessation-Supplementary Record
DDBCn	T2 Disability Cessation Date (n=1-12)
DDOD	Dual Elig-Date Of Disability Onset-Supplementary Record
DDOn	T2 Date of Disability Onset (n=1-12)
DEATH_JD	T16 Death Date
DECn	T16 Result of Determination (n=1-23)
DIB_DIG	Primary 4-digit Diagnosis
DIB_DIG2	Secondary 4-digit Diagnosis
DIB_DPM	T16 Permanent Disability Indicator
DIB_MDR	Medical Diary Reason
DIED	Indicator Died Before 1995
DIGD	Dual Elig-Primary Diagnosis-Supplementary Record
DIGn	T2 Primary Diagnosis (n=1-12)
DISPAYCD	T16 Disability Payment Code
DOBBEST	Best Birth Date
DOBFLAG	January 1 Imputed for Birth Date
DOBLONG	T16 Date of Birth - From SSR
DOBMBR	T2 Date of Birth - From MBR
DOBNUM	Numident Date of Birth
DOBREM	Date of Birth - From CER100% Field File
DOC	District Office Code
DOD	Date of Death

Variable Name	SAS Label
DODBEST	Best Death Date
DODECn	Date of Decision (SSA or DDS) (n = 1-40)
DODFLAG	January 1 Imputed for Death Date
DOEC	Date of Current SSDI Entitlement
DOECD	Dual Elig-Date of Current SSDI Entitlement-Supplementary Record
DOEI	Date of Initial SSDI Entitlement
DOEID	Dual Elig-Date of Initial Elig-Supplementary Record
DOST	Date of Suspension or Termination
DPMn	Permanent Disability Code Entry (n=1-47)
DSDD	Dual Elig-Adjudication Date-Supplementary Record
DSDn	T2 Disability Adjudication Date (n=1-12)
DUALELIG	Flag for Dual Eligible Beneficiary
DUNS_IDn	DUNS Identification Number (n=1-4)
EBDD	Dual Elig-EPE Begin Date
EBDn	EPE Begin Date (n=1-12)
ELG_RD	T16 Date of Current Eligibility
ENTDATD	Dual Elig-Date of Entitlement
ENTDATn	Date of Entitlement to SSDI (n=1-12)
ERP_IND	Economic Recovery Indicator May 09
FIRST_PA	T16 First Payment Date for This Record
FRST_DODEC	First Adjudication Date
FRST_MIE	Date MIE First Flagged
FRSTNAME	Numident Beneficiary First Name
HBICn	Historical Beneficiary Identification Code
HDDD	Dual Elig-Hearing Decision Date
HDDn	T2 Hearing Decision Date (n=1-12)
HI_START	Start Date for Hospital Insurance (HI)
HI_TERM	End Date for Hospital Insurance (HI)
HISPANIC	Hispanic Indicator
HUN	SSI Housed Under Number
IMEn	Indexed Monthly Earnings (n= 1-50)
JUDLVLn	Level of Adjudication (n=1-47)
LAF	Ledger Account File Status, Most Recent
LANG	MBR Written Language Indicator
LAST_DODEC	Last Adjudication Date
LASTNAME	Numident Beneficiary Last Name
LODD	Dual Elig-Level of Denial Code
LODn	T2 Level of Denial Code (n=1-12)
LSAP	DI Lump Sum Award Amount
LSDC	DI Lump Sum Disallowance Code
LSFD	DI Lump Sum Filing Date
LSPA	DI Lump Sum Payment Amount
LSSC_AUTPMT	DI Lump Sum Code-Authorized Payment
LSSC_BURL	DI Lump Sum Code-Burial Expense
LSSC_CHLD	DI Lump Sum Code-Entitled Child
LSSC_DSALLW	DI Lump Sum Code-Claimant Disallowed
LSSC_FUNR	DI Lump Sum Code-Funeral Home
LSSC_LVSPS	DI Lump Sum Code-Living With Spouse
LSSC_WID	DI Lump Sum Code-Entitled Widow
MALE	Male Indicator
MAX_80JD	T16 Latest Decision Date
MAXAPPRD	T16 Latest Application Date
MAXCLMFL	T16 Latest Application Receipt Date
MAXELGRD	T16 Latest SSI Eligibility Date
MAXFRSTP	T16 Latest Application, First SSI Payment Date
MAXRCDST	T16 Latest SSR Record Establishment Date
MAXSTPRD	T16 Latest Application, Eligibility Period End Date
MAXSTRRD	T16 Most Recent Start Date of SSI Payments
MBRDIG1	T2 Primary Diagnosis
MBRDIG2	T2 Secondary Diagnosis
MFT	T16 Master File Type

Variable Name	SAS Label
MIE_BEFORE_CDR	MIE Before First CDR
MIN_80JD	T16 First Decision Date
MINAPPRD	T16 First Application Date
MINCLMFL	T16 First Application Receipt Date
MINELGRD	T16 First SSI Eligibility Date
MINFRSTP	T16 First Application, First SSI Payment Date
MINRCDST	T16 First SSR Record Establishment Date
MINSTPRD	T16 First Application Eligibility Period End Date
MINSTRRD	T16 First Application Computation Date
NAINDIAN	Native American Indicator
NAMESUFX	Numident Beneficiary Name Suffix
NDOF	Number of Date of Filing Fields
NODF	Number of MBR Disability Fields
NPIA	Number of MBR PIA Entries
OTHER	Other Race Indicator
PAYSC_DEC10	State Payment Indicator
PDSCC	T16 State & County Code, SSA Code
PDZIP	T16 Payee Zip Code
PDZIP6_9	T16 Payee Zip Suffix
PIAn	T2 Primary Insurance Amount (n=1-50)
PIARFCn	T2 Reason for Change in PIA (n=1-50)
PIEDn	T2 PIA Effective Date (n=1-50)
PNOB	Number of Beneficiaries in Payment
RACE	Race or Ethnicity
RACEMISS	Missing or Unknown Race
RBn	Regulation Basis Code (n = 1-47)
RCD_EST	T16 Record Establishment Date
RDD	Reason for Disallowance or Denial
RDTn	Result of Determination (n= 1- 47)
REMDIG1	CER100% Field File Primary 4-Digit Diagnosis
REPPAYTP	T16 Type of Payee Code
REPPYSSD	Representative Payee Indicator - T2
REPPYSSI	Representative Payee Indicator - T16
RIDn	Program Identification (n=1-47)
RP	Race
RZIP	T2 Residence ZIP Code
SDIGD	Dual Elig-Secondary Diagnosis-Supplementary Record
SDIGn	T2 Secondary Diagnosis (n=1-12)
SDSD	Dual Elig-SGA Disability Cessation Date
SDSn	T2 SGA Disability Cessation (n=1-12)
SEX	Sex
SEXMISS	Indicator for Missing Sex Data
SIFT	Security Income File Type
SISC	SSI Income Status Code
SLAC	SSI Living Arrangement Code
SMI_STAR	Start Date for Supplemental Medical Insurance (SMI)
SMI_TERM	End Date for Supplemental Medical Insurance (SMI)
SSN	Social Security Number
START_RD	T16 Earliest Computation Date
STATE	T2 SSA State Code for Residence
STOP_RD	T16 End Date for Eligibility Period
T16APPLn	T16 Appeal Date (n=1-24)
T16LANG	T16 Language
T16RIDn	T16 Program Identification (n=1-27)
T16STARTn	T16 Benefit Entitlement Date (n=1-27)
T16STOPn	T16 Benefit Cessation Date (n=1-27)
TAC	Type Of Award Code
TOA	T16 Type of Action Code
TOC_NUM	T2 Number of TOC Occurrences
TOC_STARTn	T2 TOC START Date (n=1-20)
TOCn	Type of Claim (n=1-20)

Variable Name	SAS Label
TOP	Type of Payee
TWPCMPLMNTHn	TWP Completion Month (n=1-5)
UNKNOWN	Unknown Race Indicator
WHITE	White Indicator

2. Birthdate with Missing Month or Day

Most TRF date variables are stored in date-formats, but the birthdate variable from the Numident, NDOB, is stored in a character format instead, following this convention: mmddyyyy. The reason is that some records have birthdates with the month or day missing, and in these cases, SSA's convention is to fill in the missing day or month with "xx" or "99", e.g. "03xx1954" or even "xxxx1957". The resulting value is not a true date and cannot be stored in a date-format variable or used for computations or comparisons without first correcting the missing date components.

For SAS, a date variable stored as characters can be corrected by replacing the "xx" or "99" portion with a default value such as "01" or "31" and converting the character string to a date variable. Beginning with TRF06, a corrected version of NDOB was made available.

3. Date Variables and Formats

Most TRF date variables are unformatted SAS dates tied to January 1, 1960, a SAS convention. The values of these date variables represent the number of days the date occurs before or after January 1, 1960. To display these variables as dates, they must be formatted with a SAS format statement, such as:

FORMAT VAR yymmdd10.

This statement displays the internal SAS numeric value of 16649 as "2005-08-01". Other SAS formats with different display options are also available and can be found in SAS documentation. Some TRF date variables already have a SAS format attached to them and these variables will display in a recognizable format while the variable will retain the underlying numeric value.

4. Variables in the Current Version of the TRF Demo from 831 & 832/833 Files

Variables from the 831 & 832/833 files contain disability data from initial medical determinations, appeals, and CDRs. Data in the 831 represents the initial medical determination and any reconsiderations, as well as limited data from appeals, for both SSI and SSDI applicants. The 832 portion of the 832/833 file contains data from the CDR process for SSI beneficiaries, and the 833 portion of the 832/833 file contains CDR data for SSDI beneficiaries. The CDRs are generally conducted every 3 or 7 years. Each decision, whether initial or CDR, is stored as a separate record in the 831 & 832/833 files. To use this data for the TRF, we combined all records for each beneficiary and constructed variables with multiple occurrences. For example, if a beneficiary has one initial determination and three subsequent decisions, there are four records in total and the TRF will have four occurrences of DODEC (Date of Decision) and AL (Adjudicative Level). Most beneficiaries have fewer than 10 decisions. Be mindful that DODECs reflect the dates the decisions were rendered and do not indicate that the decisions were favorable (an acceptance or allowance); the decision could be unfavorable (a denial or disallowance).

Some 831 & 832/833 variables are used to build time-based variables, such as EDXyymm, where "yymm" represents a year and month, and is best explained with an example. The table below shows a beneficiary with three records in the 831 & 832/833 files. Each record for a beneficiary is identified by a DODEC value; the example shows values for only a few variables from the 831 & 832/833.

Record Number	DODEC: Date of Decision	RDT: Result of Determination	ED: Education Years
1	June 7 1997	Continuance	11
2	September 2000	Continuance	12
3	August 2003	Continuance	13

We sort the records by ascending date (DODEC) and use that date to determine which month-year field to update. We copy the value for ED (11) from the first record into the appropriate

EDXyymm field for June 1997, e.g. EDX9706. We copy '12' into EDX0009 and '13' into EDX0308. Intervening occurrences of EDXyymm are back-filled with the previous value, e.g. EDX9707 through EDX0008 is set to '11', and EDX0010 through EDX0307 is set to '12'. We finish up by applying the last value of ED (13) to all occurrences of EDXyymm from September 2003 to the end, which for TRF10 is December 2010.

5. Blank or Missing Variables in the Current Version of the TRF Demo

Some variables in the Demo component that were extracted from the MBR are blank or missing for beneficiaries who were selected during construction of TRF.1 but had left the rolls by the time construction of TRF.2 was underway. Generally these are the variables that have multiple occurrences such as EBDn (EPE Begin Date, n=1-12), JUDLVLn (Level of Adjudication, n=1-48, and PIAn (T2 Primary Insurance Amount, n=1-50). When TRF.1 was under construction, fewer variables were included in the DEMO component from the MBR. When TRF.2 was constructed, the MBR had undergone a re-write and the resulting MBR14 format offered more variables that were of interest. Many of the new variables were duly added to the TRF.2 for beneficiaries who were still on the rolls as of September 2003, the cutoff date for inclusion in TRF.2. However, for beneficiaries who had been included in TRF.1 but who had left the rolls by September 2004, the new variables were not available, and therefore the relevant variables in TRF.2 were set to blank or missing, and this pattern carried forward into all subsequent versions of the TRF. The variables added to the TRF.2.DEMO section from the new MBR14 format were:

ADCn
APSn
BDCn
DODECn
CSAn
DACn
DDBCn
DECn
DIGn
DSDn
HDDn
JUDLVLn

LODn
RDTn
RIDn
SDIGn
SDSn
T16APPLn
T16RIDn
T16STARTn
T16STOPn

C. VARIABLES IN THE TRF ANNUAL COMPONENT

1. List of Variables in TRF10 Annuals

Variable Name	SAS Label
ALLGAMTyymm	Earnings Alleged Amt (yymm= year/month)
ALXyymm	Adjudicative Level (yymm = year/month)
BPDyymm	T2 Benefit Payment Designation (yymm = year/month)
CDRyymm	T2 Cessation of Disability Reason (yymm = year/month)
CNTYyymm	T16 County of Residence, FIPS Code (yymm = year/month)
CONCyymm	Concurrent Beneficiary Status (yymm = year/month)
DIRPAYyymm	PHUS Direct Pay (yymm = year/month)
DPENyymm	Number of Dependents (yymm = year/month)
DUEDyymm	SSDI Benefit Due (yymm = year/month)
DUEOyymm	SSDI Dependent Benefit Due (yymm = year/month)
DUESyymm	SSI Benefit Due (yymm = year/month)
DX1Xyymm	Primary Disabling Condition, Monthly (yymm = year/month)
DX2Xyymm	Secondary Disabling Condition (yymm = year/month)
EARNyymm	Earned Income (yymm = year/month)
EDXyymm	Education Level (yymm = year/month)
EICMyymm	Countable Earned Income (yymm = year/month)
EINDyymm	Employment Indicator (yymm = year/month)
FACLyymm	Lives in Medical Facility Indicator (yymm = year/month)
FAMTyymm	Federal SSI Benefit Due (yymm = year/month)
FPMTyymm	Federal SSI Benefit Paid (yymm = year/month)
IEA1yymm	Earned Income Blind (yymm = year/month)
IEA2yymm	Earned Income PASS (yymm = year/month)
IEA3yymm	Earned Income Net Loss (yymm = year/month)
IEA4yymm	Earned Income Amount From Self-Employment (yymm = year/month)
IEA5yymm	Income IRWE (yymm = year/month)
IEA6yymm	Earned Income Amount From Wages (yymm = year/month)
IET1yymm	Earned Income Type Blind (yymm = year/month)
IET2yymm	Earned Income Type PASS (yymm = year/month)
IET3yymm	Earned Income Type Net Loss (yymm = year/month)
IET4yymm	Earned Income Type Self-Employed (yymm = year/month)
IET5yymm	Earned Income Type IRWE (yymm = year/month)
IET6yymm	Earned Income TYPE Wages (yymm = year/month)
IINDyymm	IRWE Indicator (yymm = year/month)
IUA1yymm	Unearned Income Amount, SSDI (yymm = year/month)
IUA3yymm	Unearned Income Amount, Workers' Compensation (yymm = year/month)
IUA6yymm	Unearned Income Amount, TANF (yymm = year/month)
LAFyymm	Ledger Account File Status (yymm = year/month)
LDWCMyymm	Combined Left Due to Work Indicator (yymm = year/month)
LDWDIyymm	T2 - Suspense or Termination Due to Work (yymm = year/month)
LDWSSIyymm	T16 - Suspense or Termination Due to Work (yymm = year/month)
LIVFyymm	Living Arrangement Code (yymm = year/month)
LONEyymm	Lives in Own Household Indicator (yymm = year/month)

Variable Name	SAS Label
MBAyymm	Federal SSDI Benefit Due (yymm = year/month)
MBPyymm	Federal SSDI Benefit Paid (yymm = year/month)
MEDCyymm	Medicaid Eligibility Code (yymm = year/month)
MEDEyymm	Medicaid Eligibility (yymm = year/month)
MEDPREMyymm	PHUS Medicare Premium (yymm = year/month)
MEDRyymm	Medicare Eligibility (yymm = year/month)
MIEXyymm	Medical Improvement Indicator (yymm = year/month)
MTSTyymm	Medical and Social Service Income Test (yymm = year/month)
OTHRyymm	Lives w/ Other Recipient Indicator (yymm = year/month)
PAYDyymm	PHUS SSDI Benefit Paid (yymm = year/month)
PAYOyymm	PHUS SSDI Dependent Benefit Paid (yymm = year/month)
PAYSyymm	SSI Benefit Paid (yymm = year/month)
PINDyymm	PASS Indicator (yymm = year/month)
PROAyymm	Use of 1619a Provision (yymm = year/month)
PROByymm	Use of 1619b Provision (yymm = year/month)
PSTAyymm	Payment Status (yymm = year/month)
PSTyymm	T2 and T16 - State Postal Code (yymm = year/month)
RFDyymm	T2 Reason for Deduction (yymm = year/month)
RFSTyymm	Reason for Suspension or Termination (yymm = year/month)
SAMTyymm	State SSI Benefit Due (yymm = year/month)
SCONyymm	State Concurrent Eligibility Indicator (yymm = year/month)
SGAyymm	SGA Flag (yymm = year/month)
SINDyymm	Self-Employment Indicator (yymm = year/month)
SPMTyymm	State SSI Benefit Paid (yymm = year/month)
SSN	Social Security Number
STyymm	T16 State of Residence, FIPS Code (yymm = year/month)
T16EXLAMTyymm	T16 Student Exclusion Amt (yymm = year/month)
T16EXPAMTyymm	T16 Work Expense Amt (yymm = year/month)
T16GRSAMTyymm	T16 Earnings Gross Amt (yymm = year/month)
T16NETAMTyymm	T16 Self-Employment Net Income Amt (yymm = year/month)
T16PASAMTyymm	T16 PASS Amt (yymm = year/month)
T16SEVERINDyymm	T16 Self-Employment Earnings Verified Switch (yymm = year/month)
T16VERINDyymm	T16 Gross Earnings Amount Verified Switch (yymm = year/month)
T2CDNAMTyymm	T2 Special Condition Amt (yymm = year/month)
T2EXPAMTyymm	T2 Work Expense Amt (yymm = year/month)
T2FRAUDVERyymm	T2 Fraud Verified Switch (yymm=year/month)
T2GRSAMTyymm	T2 Earnings Gross Amt (yymm = year/month)
T2NETAMTyymm	T2 Self-Employment Net Income Amt (yymm = year/month)
T2SBDYAMTyymm	T2 Earnings Subsidy Amt (yymm = year/month)
T2SEHRSyymm	T2 Self-Employment Hours (yymm = year/month)
T2SEVERINDyymm	T2 Self-Employment Earnings Verified Switch (yymm = year/month)
T2UBEAMTyymm	T2 Self-Employment Unpaid Business Exp Amt (yymm = year/month)
T2VERINDyymm	T2 Gross Earnings Amount Verified Switch (yymm = year/month)
TERMSSD	Terminated T2 in the Year for This Annual file
TERMSSI	Terminated T16 in the Year for This Annual file
TSSDyymm	Terminated Status - T2 (yymm = year/month)
TSSIyymm	Terminated Status - T16 (yymm = year/month)
TWPDATAyymm	T2 Trial Work Period Data (yymm = year/month)
UINCyymm	Countable Unearned Income (yymm = year/month)
WICyymm	T2 Work indication code (yymm = year/month)
ZIPyymm	T2 Zip Code (yymm = year/month)

2. Naming Convention for Variables in TRF10.Annuals

The variable suffix "yymm" indicates that the variable contains monthly values and the value of "yymm" indicates the year and month in question, e.g. EDX0302 is the variable that indicates the beneficiary's educational attainment as of February 2003.

3. Blank or Missing Variables in the Current Version of the TRF Annuals

Each annual file contains series of variables for each month in that year. For example, the variable EDX0302 is the education variable in the 2003 file, while the variable EDX0402 is the comparable variable from the 2004 file. Taken overall, the annual files on TRF10 cover each month from January 1994 to December 2010, however some monthly variables are not available for the full range of months and years. Some of these variables were not available in earlier versions of the SSA source files or did not contain meaningful or useful data until more recent years. For example, while SSA has always collected self-reported earnings information from SSI beneficiaries, it has only recently begun collecting that data from SSDI beneficiaries. As a result, although various SSDI earnings such as gross earnings and student exclusion amount are available from the DCF for many years back, that data are meaningful only from late 2002 on. Therefore the corresponding TRF variables are filled in only from January 2003 onwards. Most other earnings fields from the DCF are filled in from January 2000 onwards.

D. Variables in the TRF Ticket Component

1. List of Variables in TRF10 Ticket - Base

Variable Name	SAS Label
COSSN	Beneficiary's Own SSN
DOBTKT	Date of Birth on TKT File
DODTKT	Date of Death
DUNSn	DUNS Occurrence (n=1-30)
EVER_ACTIVE	Ticket Ever Assigned as of December of TRF Year
EVER_ELIG	Ever Eligible as of December of TRF Year
EVER_EN	Ever Assigned Ticket to EN as of December of TRF Year
EVER_EN_MO	Ever Assigned Ticket Under the Milestones + Outcomes Payment System as of December of TRF Year
EVER_EN_OO	Ever Assigned Ticket to EN:OO as of December of TRF Year
EVER_VR	Ever Assigned Ticket to SVRA as of December of TRF Year
EVER_VR_MO	Ever Assigned Ticket to SVRA:MO as of December of TRF Year

Variable Name	SAS Label
EVER_VR_OO	Ever Assigned Ticket to SVRA:OO as of December of TRF Year
EVER_VR_TR	Ever Assigned Ticket to SVRA:TR as of December of TRF Year
FRA	Beneficiary's Full Retirement Age
MINMAIL	First Ticket Mail Date
NOE	Ticket Number of Entries (1-30)
PMTTYPEn	Payment Type (n=1-30)
PROVTYPEn	Provider Type for Each Ticket (n=1-30)
TKTASGNDDTn	Ticket Assignment Date (n=1-30)
TKTMAILDDTn	Ticket Mail Date (n=1-30)
TKTTERMDDTn	Ticket Termination Date (n=1-30)
TKTUNASGDTn	Ticket Unassignment Date (n=1-30)
TRF05	Indicator for Ticket Data in Each File Version
TRF06	Indicator for Ticket Data in Each File Version
TRF07	Indicator for Ticket Data in Each File Version
TRF08	Indicator for Ticket Data in Each File Version
TRF09	Indicator for Ticket Data in Each File Version
TRF1	Indicator for Ticket Data in Each File Version
TRF10	Indicator for Ticket Data in Each File Version
TRF2	Indicator for Ticket Data in Each File Version

2. List of Variables in TRF10 Ticket - Annuals

Variable Name	SAS Label
ACTIVE_EVyymm	Ever Assigned Ticket as of Current Month (yymm=0201 and up)
ACTIVE_MOyymm	Ticket Active (Assigned) in Current Month (yymm=0201 and up)
COSSN	Beneficiary's Own SSN
DEACTIVE_EN_MOyymm	Ticket Unassigned From EN in Current Month (yymm=0201 and up)
DEACTIVE_MOyymm	Ticket Unassigned in Current Month (yymm=0201 and up)
DEACTIVE_VR_MOyymm	Ticket Unassigned From SVRA in Current Month (yymm=0201 and up)
ELIGIBLE_EVyymm	Ever Eligible for a Ticket as of Current Month (yymm=0201 and up)
ELIGIBLE_MOyymm	Eligible for a Ticket in Current Month (yymm=0201 and up)
EN_EVyymm	Ever Assigned Ticket to EN as of Current Month (yymm=0201 and up)
EN_MO_EVyymm	Ever Assigned Ticket to EN-MO as of Current Month (yymm=0201 and up)
EN_MO_MOyymm	Ticket Assigned to EN-MO in Current Month (yymm=0201 and up)
EN_OO_EVyymm	Ever Assigned Ticket to EN-OO as of Current Month (yymm=0201 and up)
EN_OO_MOyymm	Ticket Assigned to EN-OO in Current Month (yymm=0201 and up)
FIRST_ASGN_EN_MOyymm	Ticket First Assigned to EN in Current Month (yymm=0201 and up)
FIRST_ASGN_MOyymm	Ticket First Assigned in Current Month (yymm=0201 and up)
FIRST_ASGN_VR_MOyymm	Ticket First Assigned to SVRA in Current Month (yymm=0201 and up)
INUSE_MOyymm	Ticket In-Use (yymm = year/month)
MAIL_MOyymm	Ticket Mailed in Calendar Month (yymm=0201 and up)
PMTTYPE_MOyymm	Payment Type for Active Ticket in Current Month (yymm=0201 and up)
PROVTYPE_MOyymm	Provider Type for Active Ticket in Current Month (yymm=0201 and up)
REASSIGN_EN_MOyymm	Ticket Re-Assigned to EN as of Current Month (yymm=0201 and up)
REASSIGN_MOyymm	Ticket Re-Assigned in Current Month (yymm=0201 and up)
REASSIGN_VR_MOyymm	Ticket Re-Assigned to SVRA as of Current Month (yymm=0201 and up)
TITLE_MOyymm	Ticket Title (program) in Current Month (yymm=0201 and up)
VR_EVyymm	Ever Assigned Ticket to SVRA as of Current Month (yymm=0201 and up)
VR_MO_EVyymm	Ever Assigned Ticket to SVRA-MO as of Current Month (yymm=0201 and up)
VR_MO_MOyymm	Ticket Assigned to SVRA-MO in Current Month (yymm=0201 and up)
VR_OO_EVyymm	Ever Assigned Ticket to SVRA-OO as of Current Month (yymm=0201 and up)
VR_OO_MOyymm	Ticket Assigned to SVRA-OO in Current Month (yymm=0201 and up)
VR_TR_EVyymm	Ever Assigned Ticket to SVRA-TR as of Current Month (yymm=0201 and up)
VR_TR_MOyymm	Ticket Assigned to SVRA-TR in Current Month (yymm=0201 and up)

3. Naming Convention for Variables in TRF10 Ticket

The variable suffix "yymm" indicates that the variable contains monthly values and the value of "yymm" indicates the year and month in question, e.g. ACTIVE_MO0302 is the variable that indicates the beneficiary had an active ticket during February 2003. The monthly Ticket variables being with January 2002, the month the Ticket-to-Work program began.

4. Date Variables and Formats

Most TRF date variables such as TKTMAILDDTn and DOBTKT are unformatted SAS dates tied to January 1, 1960, a SAS convention. The values of these date variables represent the number of days the date occurs before or after January 1, 1960. To display these variables as dates, they must be formatted with a SAS format statement, such as:

FORMAT VAR yymmdd10.

This statement displays the internal SAS numeric value of 16649 as "2005-08-01". Other SAS formats with different display options are also available and can be found in SAS documentation. Some TRF date variables already have a SAS format attached to them and as such will display in a recognizable format while the variable will retain the underlying numeric value.

E. Variables in the TRF Payments Component

1. List of Variables in TRF10 Payments

Variable Name	SAS Label
DUNS_IDn	DUNS Identification Number (n=1-4)
EN_NAMEn	First, Second, Third, or Fourth EN Name (n=1-4)
HAS_M_DATA	Flag for Beneficiaries With Milestone Payments
HAS_O_DATA	Flag for Beneficiaries With Outcome Payments
M_DTPYyymm	Date Payment (yymm = year/month)
M_PYMTyymm	Payment Amount (yymm = year/month)
M_PYNMyymm	Payment Number (yymm = year/month)
M_TRIGGEREDyymm	Triggered By (yymm = year/month)
M_TYPNUMyymm	M Type Payment (yymm = year/month)
M_TYPYyymm	Type Payment (yymm = year/month)
O_DTPYyymm	Date Payment (yymm = year/month)
O_PYMTyymm	Payment Amount (yymm = year/month)
O_PYNMyymm	Payment Number (yymm = year/month)
O_TRIGGEREDyymm	Triggered By (yymm = year/month)
O_TYPNUMyymm	O Type Payment Number
O_TYPYyymm	Type Payment (yymm = year/month)
SSN	Social Security Number

2. Naming Convention for Variables in TRF10 Payments

The variable suffix "yymm" indicates that the variable contains monthly values and the value of "yymm" indicates the year and month in question, e.g. M_DTPY0302 is the variable that indicates the date payment as of February 2003.

F. Variables in the RSA TRF-Linkable File

Variable Name	Variable Name	Variable Name
COSSN	RSADOA1	RSADOE1
RSAAGY1	RSADOA2	RSADOE2
RSAAGY2	RSADOA3	RSADOE3
RSAAGY3	RSADOA4	RSADOE4
RSAAGY4	RSADOA5	RSADOE5
RSAAGY5	RSADOA6	RSADOE6
RSAAGY6	RSADOA7	RSADOE7
RSAAGY7	RSADOA8	RSADOE8
RSAAGY8	RSADOA9	RSADOE9
RSAAGY9	RSADOA10	RSADOE10
RSAAGY10	RSADOA11	RSADOE11
RSAAGY11	RSADOA12	RSADOE12
RSAAGY12	RSADOA13	RSADOE13
RSAAGY13	RSADOA14	RSADOE14
RSAAGY14	RSADOA15	RSADOE15
RSAAGY15	RSADOA16	RSADOE16
RSAAGY16	RSADOA17	RSADOE17
RSAAGY17	RSADOA18	RSADOE18
RSAAGY18	RSADOA19	RSADOE19
RSAAGY19	RSADOA20	RSADOE20
RSAAGY20	RSADOC1	RSASVS1
RSACLTYP1	RSADOC2	RSASVS2
RSACLTYP2	RSADOC3	RSASVS3
RSACLTYP3	RSADOC4	RSASVS4
RSACLTYP4	RSADOC5	RSASVS5
RSACLTYP5	RSADOC6	RSASVS6
RSACLTYP6	RSADOC7	RSASVS7
RSACLTYP7	RSADOC8	RSASVS8
RSACLTYP8	RSADOC9	RSASVS9
RSACLTYP9	RSADOC10	RSASVS10
RSACLTYP10	RSADOC11	RSASVS11
RSACLTYP11	RSADOC12	RSASVS12
RSACLTYP12	RSADOC13	RSASVS13
RSACLTYP13	RSADOC14	RSASVS14
RSACLTYP14	RSADOC15	RSASVS15
RSACLTYP15	RSADOC16	RSASVS16
RSACLTYP16	RSADOC17	RSASVS17
RSACLTYP17	RSADOC18	RSASVS18
RSACLTYP18	RSADOC19	RSASVS19
RSACLTYP19	RSADOC20	RSASVS20
RSACLTYP20	RSADOE	

Further information on the source of the variables in the RSA TRF-Linkable File is available in Appendix O of this document, "File Layout of the RSA-911 Files".

G. Variables in the DER TRF-Linkable File

Variable Name
ALLEARN1987
ALLEARN1988
ALLEARN1989
ALLEARN1990
ALLEARN1991
ALLEARN1992
ALLEARN1993
ALLEARN1994
ALLEARN1995
ALLEARN1996
ALLEARN1997
ALLEARN1998
ALLEARN1999
ALLEARN2000
ALLEARN2001
ALLEARN2002
ALLEARN2003
ALLEARN2004
ALLEARN2005
ALLEARN2006
ALLEARN2007
ALLEARN2008
ALLEARN2009
DEF_DSTB
DUPLCT_COUNT_YR
FEIN1987
FEIN1988
FEIN1989
FEIN1990
FEIN1991
FEIN1992
FEIN1993
FEIN1994
FEIN1995
FEIN1996
FEIN1997
FEIN1998
FEIN1999
FEIN2000
FEIN2001
FEIN2002
FEIN2003
FEIN2004
FEIN2005
FEIN2006
FEIN2007
FEIN2008
FEIN2009
LAST_DER_YR

Variable Name
PRWAGE1987
PRWAGE1988
PRWAGE1989
PRWAGE1990
PRWAGE1991
PRWAGE1992
PRWAGE1993
PRWAGE1994
PRWAGE1995
PRWAGE1996
PRWAGE1997
PRWAGE1998
PRWAGE1999
PRWAGE2000
PRWAGE2001
PRWAGE2002
PRWAGE2003
PRWAGE2004
PRWAGE2005
PRWAGE2006
PRWAGE2007
PRWAGE2008
PRWAGE2009
SE_EARN1987
SE_EARN1988
SE_EARN1989
SE_EARN1990
SE_EARN1991
SE_EARN1992
SE_EARN1993
SE_EARN1994
SE_EARN1995
SE_EARN1996
SE_EARN1997
SE_EARN1998
SE_EARN1999
SE_EARN2000
SE_EARN2001
SE_EARN2002
SE_EARN2003
SE_EARN2004
SE_EARN2005
SE_EARN2006
SE_EARN2007
SE_EARN2008
SE_EARN2009
SSN
TIPS_SS
TLWAGE1987

Variable Name
TLWAGE1988
TLWAGE1989
TLWAGE1990
TLWAGE1991
TLWAGE1992
TLWAGE1993
TLWAGE1994
TLWAGE1995
TLWAGE1996
TLWAGE1997
TLWAGE1998
TLWAGE1999
TLWAGE2000
TLWAGE2001
TLWAGE2002
TLWAGE2003
TLWAGE2004
TLWAGE2005
TLWAGE2006
TLWAGE2007
TLWAGE2008
TLWAGE2009
WAGE_SS
WAGE_TIPS_RR
WORK1987
WORK1988
WORK1989
WORK1990
WORK1991
WORK1992
WORK1993
WORK1994
WORK1995
WORK1996
WORK1997
WORK1998
WORK1999
WORK2000
WORK2001
WORK2002
WORK2003
WORK2004
WORK2005
WORK2006
WORK2007
WORK2008
WORK2009

Further information on the source of the variables in the DER TRF-Linkable File is available in Appendix Q of this document, "File Layout of the DER File".

H. Variables in the VRRMS TRF-Linkable File

Not every variable in this file currently has a label.

Variable Name	SAS Label
ACP_ACCEPT	ACP REIMBURSABLE BEFORE OTHER CHECKS
ACP_ALLOWED	ACP COSTS DUE VRA AFTER OTHER CHECKS
ACP_CLAIMED	ACP COST AMOUNT CLAIMED BY VRA
C_1ST_NAME	FIRST NAME
C_BEGIN_PPD	TII ONSET DATE OR TXVI 1ST ELIG. DATE
C_BIC	THE BENEFICIARY IDENTIFICATION CODE
C_BIRTHDAY	DATE OF BIRTH
C_BL_DIB_DEC_F	INDICATOR-TII DISAB DUE TO BLINDNESS
C_CLM_ENTERED	DATE CLAIM ENTERED INTO SYSTEM
C_CNTL_CNTR	NUMBER OF VR PERIOD FOR MULTIPLE VR PERS
C_CONTRIB_F	INDICATOR-VR SERVICES CONTRIBUTED SGA
C_DETL_CNTR	NUMBER OF CLAIMS FOR SAME SSN/VR PERIOD
C_DISP_DTE	DATE CLAIM DISPATCHED
C_EMP_BEGAN	DATE EMPLOYMENT BEGAN
C_ENTIT_END	DATE DISABILITY PAYMENT ELIG. ENDS
C_EXCLUD_MOS	
C_EXT_EVL_F	INDICATOR-VRA SOLE PROVIDER IN EXTD EVAL
C_FO_CODE	THE CLIENTS FIELD OFFICE CODE
C_GROSS_PPD_B	GROSS PAY PER BEGIN DATE-1ST PAY/10/1/81
C_GROSS_PPD_E	GROSS PAY PER END DATE-LAST ENTLMT/SGA
C_INELIG_INCLD	
C_INELIG_NET	
C_INELIG_TRK	
C_IPE_DT	
C_LAST_NAME	LAST NAME
C_MBR_PIA	PRIMARY INSURANCE AMOUNT FOR TII BENE
C_MDIBP_F	INDICATOR-MULTIPLE DISABILITY PERIODS
C_MED_RECOV_CESS	THE REASON SSA MONTHLY BENEFITS CEASED
C_MED_SVC_F	INDICATOR-VRA PROVIDED MEDICAL SERVICES
C_MID_INIT	MIDDLE INITIAL
C_MR_EXP_F	INDICATOR-MIE AND MEDICAL CESSATION
C_NET_PPD_B	NET PAY PER BEGIN DATE-GROSS/VR ENTERED
C_NET_PPD_E	NET PAY PER END DATE-GROSS/VR CLOSURE
C_PCODE	PAYMENT CODE-ALLOWED/DENIED/TECH REVISED
C_POST_EMP_BEGIN_DATE	
C_POST_EMP_END_DATE	
C_POST_EMP_NO_OF_MONTH	
C_PRG_CLMD	THE PROGRAM REIMBURSING VRA-DI/SSI/CON
C_PRIOR_PMT_OTH_PD	
C_PRIOR_PMT_THIS_PD	
C_RPB_RECVD	DATE CLAIM RECEIVED BY SSA/OESP
C_SEX	GENDER
C_SGA_BASIS_CDE	
C_SGA_DEC_CDE	
C_SGA_END	LAST DAY OF LAST MONTH OF CONTINUOUS SGA
C_SGA_START	1ST DAY OF 1ST MONTH OF CONTINUOUS SGA
C_SSI_FLA	SSI FEDERAL LIVING ARRANGEMENT
C_TF_COSTS	COMPUTED TRUST FUND COSTS W/O REHAB
C_TF_SAVINGS	CALCULATED SAVINGS TO THE TRUST FUND
C_TOC	
C_TRK_MNTHS	NUMBER MONTHS WORK ACTIVITY TRKD BY VRA
C_TRK_PPD_B	FIRST DAY OF MO. AFTER NET PAY END DATE
C_TRK_PPD_E	EQUAL TO GROSS PAY PERIOD END DATE
C_VR_BLIND_F	INDICATOR-CLIENT IS BLIND (IGNORING TII)
C_VR_CLOSED	DATE OF FINAL VR CLOSURE
C_VR_CLOSED_FIRST	VR CLOSE DATE ON THE EARLIEST SPELL

Variable Name	SAS Label
C_VR_CLOSED_PREV_1	VR CLOSE DATE ON THE FIRST PREVIOUS CLAIM
C_VR_REMARK	INDICATOR OF ADDITIONAL VRA COMMENTS
C_VRA_ENTER	DATE THE CLAIMANT ENTERED VR
C_VRA_ENTER_FIRST	VR ENTER DATE ON THE EARLIEST SPELL
C_VRA_ENTER_PREV_1	VR ENTER DATE ON THE FIRST PREVIOUS CLAIM
C_WC_DEDUCT	WORKERS COMPENSATION OFFSET
C_XREF_SSN	THE CROSS REFERENCE SSN OF BENEFICIARY
COUNT_CLAIMS	COUNT OF CLAIMS DETAIL RECORDS FOR A PERIOD OF VR PARTICIPATION
COUNT_SPELLS	COUNT OF NUMBER OF VR SPELLS FOR A BENEFICIARY
DI_ALLOWED	
DI_BENEFITS	
DIR_ACCEPT	DIRECT REIMBURSABLE BEFORE OTHER CHECKS
DIR_ALLOWED	DIRECT COSTS DUE VRA AFTER OTHER CHECKS
DIR_CLAIMED	DIRECT COST AMOUNT CLAIMED BY VRA
OTH_ACCEPT	OTHER REIMBURSABLE BEFORE OTHER CHECKS
OTH_ALLOWED	OTHER COSTS DUE VRA AFTER OTHER CHECKS
OTH_CLAIMED	OTHER COST AMOUNT CLAIMED BY VRA
P_ID	
PERS_ID	
SSI_ALLOWED	
SSI_BENEFITS	
SSN	SSN
SUM_ALLOWED	
SUMDIFF	
TL_ALLOWED	TOTAL ALLOWED
TL_ALLOWED_FIRST	TOTAL ALLOWED ON THE EARLIEST SPELL
TL_ALLOWED_PREV_1	TOTAL ALLOWED ON THE FIRST PREVIOUS CLAIM
TRK_ACCEPT	TRACKING REIMBURSABLE BEFORE OTHR CHECKS
TRK_ALLOWED	TRACKING COSTS DUE VR AFTER OTHER CHECKS
TRK_CLAIMED	TRACKING COST AMOUNT CLAIMED BY VRA
V_ALT_CODE	VRA CODE

Further information on the source of the variables in the VRRMS TRF-Linkable File is available in Appendix P of this document, "File Layout of the VRRMS Files".

I. System Variables in the TRF

This Data Dictionary and the User's Guide both describe TRF analytical variables. In addition, there are a number of system variables in the TRF not intended for research use and these are not described in the Data Dictionary. A list of the variables is presented here.

Variable Name
CDRIND
DEMOIND
TRF1
TRF2
TRF05

Variable Name
TRF06
TRF07
TRF08
TRF09
TRF10

Variable Name
SSDIIND
SSIIND

J. Variables Grouped by Analytic Categories

The following tables contain neither exhaustive nor mutually exclusive lists of variables. Rather, this section is an effort to sort frequently used variables into categories likely to be of use to researchers.

1. Record Identification

SSDI beneficiaries may receive benefits as a result of the work history of another person. In the TRF database, however, each beneficiary has only one record. These variables are used in combination to identify and create the single record for each disabled beneficiary.

Variable Name	Label
CAN	Claim Account Number
COSSN	Beneficiary's Own SSN
HUN	SSI Housed Under Number
SSN	Social Security Number

2. Widows and Auxiliary Beneficiaries

These variables refer exclusively to widows and other auxiliary beneficiaries, i.e., disabled beneficiaries who are receiving SSDI benefits under an SSN that is not their own.

Variable Name	Label
DPENyymm	Number of Dependents (yymm = year/month)
DUEOyymm	SSDI Dependent Benefit Due (yymm = year/month)
LSSC_CHLD	DI Lump Sum Code-Entitled Child
LSSC_DSALLW	DI Lump Sum Code-Claimant Disallowed
LSSC_LVSPS	DI Lump Sum Code-Living With Spouse
LSSC_WID	DI Lump Sum Code-Entitled Widow
PNOB	Number of Beneficiaries in Payment

3. Demographic

These variables provide person-specific information, i.e., data not directly related to benefit eligibility or payment.

Variable Name	Label
AGE18_CDR	Indicator for Adult Redetermination

Variable Name	Label
ASIAN	Asian Indicator
BDOD	MBR Date of Death
BGN	Beneficiary Given Name
BLACK	African-American Indicator
BLN	Beneficiary Last Name
BMI	Beneficiary Middle Initial
CITIZEN	US Citizenship Indicator
CNTYyymm	T16 County of Residence, FIPS Code (yymm = year/month)
COUNTY	T2 SSA County Code for Residence
DEATH_JD	T16 Death Date
DIED	Indicator Died Before 1995
DOBBEST	Best Birth Date
DOBFLAG	January 1 Imputed for Birth Date
DOBLONG	T16 Date of Birth - From SSR
DOBMBR	T2 Date of Birth - From MBR
DOBNUM	Numident Date of Birth
DOBREM	Date of Birth - From CER100% Field File
DOBTKT	Date of Birth on TKT File
DOC	District Office Code
DOD	Date of Death
DODBEST	Best Death Date
DODECn	Date of Decision (SSA or DDS) (n = 1-40)
DODFLAG	January 1 Imputed for Death Date
DODTKT	Date of Death
EDXyymm	Education Level (yymm = year/month)
FACLyymm	Lives in Medical Facility Indicator (yymm = year/month)
FRA	Beneficiary's Full Retirement Age
FRSTNAME	Numident Beneficiary First Name
HISPANIC	Hispanic Indicator
LANG	MBR Written Language Indicator
LASTNAME	Numident Beneficiary Last Name
LIVFyymm	Living Arrangement Code (yymm = year/month)
MALE	Male Indicator
NAINDIAN	Native American Indicator
NAMESUFX	Numident Beneficiary Name Suffix
OTHER	Other Race Indicator
OTHRyymm	Lives w/ Other Recipient Indicator (yymm = year/month)
PDSCC	T16 State & County Code, SSA Code
PDZIP	T16 Payee Zip Code
PDZIP6_9	T16 Payee Zip Suffix
PSTyymm	T2 and T16 - State Postal Code (yymm = year/month)
RACE	Race or Ethnicity
RACEMISS	Missing or Unknown Race
REPPAYTP	T16 Type of Payee Code
REPPYSSD	Representative Payee Indicator - T2
REPPYSSI	Representative Payee Indicator - T16
RP	Race
RZIP	T2 Residence ZIP Code
SEX	Sex
SEXMISS	Indicator for Missing Sex Data
SLAC	SSI Living Arrangement Code
STATE	T2 SSA State Code for Residence
STyymm	T16 State of Residence, FIPS Code (yymm = year/month)
T16LANG	T16 Language
TOP	Type of Payee
UNKNOWN	Unknown Race Indicator
WHITE	White Indicator
ZIPyymm	T2 Zip Code (yymm = year/month)

4. Disability and Medical

These variables provide beneficiary medical data, including SSA disability determinations, redeterminations, and diagnoses.

Variable Name	Label
ADCD	Dual Elig-Applicant Disab Cessation Date-Supplementary Record
ADCn	T2 Applicant's Disability Cessation Date (n = 1-12)
AGE18REDDT	Age 18 Redetermination Date
BLINDDT	Date of Blindness Onset
CDRD	Dual Elig-T2 Disability Cessation Reason-Supplementary Record
CDRn	T2 Disability Cessation Reason (n=1-12)
CDRyymm	T2 Cessation of Disability Reason (yymm = year/month)
DDBCD	Dual Elig-Date Of Benefit Cessation-Supplementary Record
DDBCn	T2 Disability Cessation Date (n=1-12)
DDOD	Dual Elig-Date Of Disability Onset-Supplementary Record
DDOn	T2 Date of Disability Onset (n=1-12)
DIB_DIG	Primary 4-digit Diagnosis
DIB_DIG2	Secondary 4-digit Diagnosis
DIB_DPM	T16 Permanent Disability Indicator
DIB_MDR	Medical Diary Reason
DIGD	Dual Elig-Primary Diagnosis-Supplementary Record
DIGn	T2 Primary Diagnosis (n=1-12)
DPMn	Permanent Disability Code Entry (n=1-47)
DX1Xyymm	Primary Disabling Condition, Monthly (yymm = year/month)
DX2Xyymm	Secondary Disabling Condition (yymm = year/month)
FRST_MIE	Date MIE First Flagged
HI_START	Start Date for Hospital Insurance (HI)
HI_TERM	End Date for Hospital Insurance (HI)
MBRDIG1	T2 Primary Diagnosis
MBRDIG2	T2 Secondary Diagnosis
MEDCyymm	Medicaid Eligibility Code (yymm = year/month)
MEDEyymm	Medicaid Eligibility (yymm = year/month)
MEDRyymm	Medicare Eligibility (yymm = year/month)
MIE_BEFORE_CDR	MIE Before First CDR
MIEXyymm	Medical Improvement Indicator (yymm = year/month)
REMDIG1	CER100% Field File Primary 4-Digit Diagnosis
SDIGD	Dual Elig-Secondary Diagnosis-Supplementary Record
SDIGn	T2 Secondary Diagnosis (n=1-12)
SGAyymm	SGA Flag (yymm = year/month)
SMI_STAR	Start Date for Supplemental Medical Insurance (SMI)
SMI_TERM	End Date for Supplemental Medical Insurance (SMI)

5. Program Participation

These variables describe the SSA program(s) under which the beneficiary has filed.

Variable Name	Label
_8080_JD	Initial Decision Date
ADCD	Dual Elig-Applicant Disab Cessation Date-Supplementary Record
ADCn	T2 Applicant's Disability Cessation Date (n = 1-12)
AGE18_CDR	Indicator for Adult Redetermination
AGE18REDDT	Age 18 Redetermination Date
ALXyymm	Adjudicative Level (yymm = year/month)
APP_RD	T16 Application Date (Current)
APSD	Dual Elig-Appeals Date- Supplementary Record
APSn	T2 Appeals Date (n=1-12)
BDCD	Dual Elig-Basis for Denial Code-Supplementary Record
BDCn	Basis for Denial Code T2 (n=1-12)
BDOFn	Beneficiary Date of Filing Entry (n=1-15)
BIC	Beneficiary Identification Code
BPDyymm	T2 Benefit Payment Designation (yymm = year/month)
CDRD	Dual Elig-T2 Disability Cessation Reason-Supplementary Record
CDRn	T2 Disability Cessation Reason (n=1-12)
CDRyymm	T2 Cessation of Disability Reason (yymm = year/month)
CEC	DI Current Entitlement Code
CLM_FIL	T16 Date Claim Filed
COMP_STA	T16 Status Type of Action
CONCyymm	Concurrent Beneficiary Status (yymm = year/month)
CURSTAT	T16 Current Payment Status
DACD	Dual Elig-Disability Award Code-Supplementary Record
DACn	T2 Disability Award Code (n=1-12)
DDBCD	Dual Elig-Date Of Benefit Cessation-Supplementary Record
DDBCn	T2 Disability Cessation Date (n=1-12)
DDOD	Dual Elig-Date Of Disability Onset-Supplementary Record
DDOn	T2 Date of Disability Onset (n=1-12)
DECn	T16 Result of Determination (n=1-23)
DOC	District Office Code
DODECn	Date of Decision (SSA or DDS) (n = 1-40)
DOEC	Date of Current SSDI Entitlement
DOECD	Dual Elig-Date of Current SSDI Entitlement-Supplementary Record
DOEI	Date of Initial SSDI Entitlement
DOEID	Dual Elig-Date of Initial Elig-Supplementary Record
DOST	Date of Suspension or Termination
DSDD	Dual Elig-Adjudication Date-Supplementary Record
DSDn	T2 Disability Adjudication Date (n=1-12)
DUALELIG	Flag for Dual Eligible Beneficiary
EBDD	Dual Elig-EPE Begin Date
EBDn	EPE Begin Date (n=1-12)
ELG_RD	T16 Date of Current Eligibility
ENTDATD	Dual Elig-Date of Entitlement
ENTDATn	Date of Entitlement to SSDI (n=1-12)
FIRST_PA	T16 First Payment Date for This Record
FRST_DODEC	First Adjudication Date
FRST_MIE	Date MIE First Flagged
HDDD	Dual Elig-Hearing Decision Date
HDDn	T2 Hearing Decision Date (n=1-12)
IMEn	Indexed Monthly Earnings (n= 1-50)
JUDLVLn	Level of Adjudication (n=1-47)
LAF	Ledger Account File Status, Most Recent
LAFyymm	Ledger Account File Status (yymm = year/month)
LAST_DODEC	Last Adjudication Date
LDWCMyymm	Combined Left Due to Work Indicator (yymm = year/month)

Variable Name	Label
LDWDIyymm	T2 - Suspense or Termination Due to Work (yymm = year/month)
LDWSSIyymm	T16 - Suspense or Termination Due to Work (yymm = year/month)
LODD	Dual Elig-Level of Denial Code
LODn	T2 Level of Denial Code (n=1-12)
LONEyymm	Lives in Own Household Indicator (yymm = year/month)
MAX_80JD	T16 Latest Decision Date
MAXAPPRD	T16 Latest Application Date
MAXCLMFL	T16 Latest Application Receipt Date
MAXELGRD	T16 Latest SSI Eligibility Date
MAXFRSTP	T16 Latest Application, First SSI Payment Date
MAXRCDST	T16 Latest SSR Record Establishment Date
MAXSTPRD	T16 Latest Application, Eligibility Period End Date
MAXSTRRD	T16 Most Recent Start Date of SSI Payments
MFT	T16 Master File Type
MIE_BEFORE_CDR	MIE Before First CDR
MIEXyymm	Medical Improvement Indicator (yymm = year/month)
MIN_80JD	T16 First Decision Date
MINAPPRD	T16 First Application Date
MINCLMFL	T16 First Application Receipt Date
MINELGRD	T16 First SSI Eligibility Date
MINFRSTP	T16 First Application, First SSI Payment Date
MINRCDST	T16 First SSR Record Establishment Date
MINSTPRD	T16 First Application Eligibility Period End Date
MINSTRRD	T16 First Application Computation Date
MTSTyymm	Medical and Social Service Income Test (yymm = year/month)
PIAn	T2 Primary Insurance Amount (n=1-50)
PIARFCn	T2 Reason for Change in PIA (n=1-50)
PIEDn	T2 PIA Effective Date (n=1-50)
PROAyymm	Use of 1619a Provision (yymm = year/month)
PROByymm	Use of 1619b Provision (yymm = year/month)
PSTAyymm	Payment Status (yymm = year/month)
RBn	Regulation Basis Code (n = 1-47)
RCD_EST	T16 Record Establishment Date
RDD	Reason for Disallowance or Denial
RDTn	Result of Determination (n= 1- 47)
RFDyymm	T2 Reason for Deduction (yymm = year/month)
RFSTyymm	Reason for Suspension or Termination (yymm = year/month)
RIDn	Program Identification (n=1-47)
SCONyymm	State Concurrent Eligibility Indicator (yymm = year/month)
SDSD	Dual Elig-SGA Disability Cessation Date
SDSn	T2 SGA Disability Cessation (n=1-12)
SGAyymm	SGA Flag (yymm = year/month)
SIFT	Security Income File Type
SISC	SSI Income Status Code
START_RD	T16 Earliest Computation Date
STOP_RD	T16 End Date for Eligibility Period
T16APPLn	T16 Appeal Date (n=1-24)
T16RIDn	T16 Program Identification (n=1-27)
T16STARTn	T16 Benefit Entitlement Date (n=1-27)
T16STOPn	T16 Benefit Cessation Date (n=1-27)
TERMSSD	Terminated T2 in the Year for This Annual file
TERMSSI	Terminated T16 in the Year for This Annual file
TITLE_MOyymm	Ticket Title (program) in Current Month (yymm=0201 and up)
TOA	T16 Type of Action Code
TOC_NUM	T2 Number of TOC Occurrences
TOC_STARTn	T2 TOC START Date (n=1-20)
TOCn	Type of Claim (n=1-20)
TSSDyymm	Terminated Status - T2 (yymm = year/month)
TSSIyymm	Terminated Status - T16 (yymm = year/month)

6. Benefit and Payment Amounts

The relationship between SSA disability program eligibility and the benefits received under those programs is complex. These variables delineate that relationship.

Variable Name	Label
DIRPAYyymm	PHUS Direct Pay (yymm = year/month)
DUEDyymm	SSDI Benefit Due (yymm = year/month)
DUEOyymm	SSDI Dependent Benefit Due (yymm = year/month)
DUESyymm	SSI Benefit Due (yymm = year/month)
ERP_IND	Economic Recovery Indicator May 09
FAMTyymm	Federal SSI Benefit Due (yymm = year/month)
FPMTyymm	Federal SSI Benefit Paid (yymm = year/month)
LSAP	DI Lump Sum Award Amount
LSDC	DI Lump Sum Disallowance Code
LSFD	DI Lump Sum Filing Date
LSPA	DI Lump Sum Payment Amount
LSSC_AUTPMT	DI Lump Sum Code-Authorized Payment
LSSC_BURL	DI Lump Sum Code-Burial Expense
LSSC_CHLD	DI Lump Sum Code-Entitled Child
LSSC_DSALLW	DI Lump Sum Code-Claimant Disallowed
LSSC_FUNR	DI Lump Sum Code-Funeral Home
LSSC_LVSPS	DI Lump Sum Code-Living With Spouse
LSSC_WID	DI Lump Sum Code-Entitled Widow
MBAyymm	Federal SSDI Benefit Due (yymm = year/month)
MBPyymm	Federal SSDI Benefit Paid (yymm = year/month)
MEDPREMyymm	PHUS Medicare Premium (yymm = year/month)
PAYDyymm	PHUS SSDI Benefit Paid (yymm = year/month)
PAYOyymm	PHUS SSDI Dependent Benefit Paid (yymm = year/month)
PAYSC_DEC10	State Payment Indicator
PAYSyymm	SSI Benefit Paid (yymm = year/month)
SAMTyymm	State SSI Benefit Due (yymm = year/month)
SPMTyymm	State SSI Benefit Paid (yymm = year/month)
TAC	Type Of Award Code

7. Earnings, Income, and Work

SSA defines disability in terms of the ability to work. Earnings from employment, therefore, affect eligibility and benefits. These variables all relate to beneficiary earnings and the effect of those earnings on benefits received.

Variable Name	Label
ALLGAMTyymm	Earnings Alleged Amt (yymm= year/month)
CSAD	Dual Elig-Current SGA Status-Supplementary Record
CSAn	T2 Current SGA Activity (n=1-12)
EARNyymm	Earned Income (yymm = year/month)
EICMyymm	Countable Earned Income (yymm = year/month)
EINDyymm	Employment Indicator (yymm = year/month)
IEA1yymm	Earned Income Blind (yymm = year/month)
IEA2yymm	Earned Income PASS (yymm = year/month)
IEA3yymm	Earned Income Net Loss (yymm = year/month)
IEA4yymm	Earned Income Amount From Self-Employment (yymm = year/month)
IEA5yymm	Income IRWE (yymm = year/month)
IEA6yymm	Earned Income Amount From Wages (yymm = year/month)
IET1yymm	Earned Income Type Blind (yymm = year/month)
IET2yymm	Earned Income Type PASS (yymm = year/month)
IET3yymm	Earned Income Type Net Loss (yymm = year/month)
IET4yymm	Earned Income Type Self-Employed (yymm = year/month)
IET5yymm	Earned Income Type IRWE (yymm = year/month)
IET6yymm	Earned Income TYPE Wages (yymm = year/month)
IINDyymm	IRWE Indicator (yymm = year/month)
IUA1yymm	Unearned Income Amount, SSDI (yymm = year/month)
IUA3yymm	Unearned Income Amount, Workers' Compensation (yymm = year/month)
IUA6yymm	Unearned Income Amount, TANF (yymm = year/month)
LDWCMyymm	Combined Left Due to Work Indicator (yymm = year/month)
LDWDIyymm	T2 - Suspense or Termination Due to Work (yymm = year/month)
LDWSSIyymm	T16 - Suspense or Termination Due to Work (yymm = year/month)
PINDyymm	PASS Indicator (yymm = year/month)
SDSD	Dual Elig-SGA Disability Cessation Date
SDSn	T2 SGA Disability Cessation (n=1-12)
SGAyymm	SGA Flag (yymm = year/month)
SINDyymm	Self-Employment Indicator (yymm = year/month)
T16EXLAMTyymm	T16 Student Exclusion Amt (yymm = year/month)
T16EXPAMTyymm	T16 Work Expense Amt (yymm = year/month)
T16GRSAMTyymm	T16 Earnings Gross Amt (yymm = year/month)
T16NETAMTyymm	T16 Self-Employment Net Income Amt (yymm = year/month)
T16PASAMTyymm	T16 PASS Amt (yymm = year/month)
T16SEVERINDyymm	T16 Self-Employment Earnings Verified Switch (yymm = year/month)
T16VERINDyymm	T16 Gross Earnings Amount Verified Switch (yymm = year/month)
T2CDNAMTyymm	T2 Special Condition Amt (yymm = year/month)
T2EXPAMTyymm	T2 Work Expense Amt (yymm = year/month)
T2FRAUDVERyymm	T2 Fraud Verified Switch (yymm=year/month)
T2GRSAMTyymm	T2 Earnings Gross Amt (yymm = year/month)
T2NETAMTyymm	T2 Self-Employment Net Income Amt (yymm = year/month)
T2SBDYAMTyymm	T2 Earnings Subsidy Amt (yymm = year/month)
T2SEHRSyymm	T2 Self-Employment Hours (yymm = year/month)
T2SEVERINDyymm	T2 Self-Employment Earnings Verified Switch (yymm = year/month)
T2UBEAMTyymm	T2 Self-Employment Unpaid Business Exp Amt (yymm = year/month)
T2VERINDyymm	T2 Gross Earnings Amount Verified Switch (yymm = year/month)
TWPCMPLMNTHn	TWP Completion Month (n=1-5)
TWPDATAyymm	T2 Trial Work Period Data (yymm = year/month)
UINCyymm	Countable Unearned Income (yymm = year/month)
WICyymm	T2 Work indication code (yymm = year/month)

8. Ticket Participation

These variables describe beneficiary participation in the Ticket to Work program.

Variable Name	Label
ACTIVE_EVyymm	Ever Assigned Ticket as of Current Month (yymm=0201 and up)
ACTIVE_MOyymm	Ticket Active (Assigned) in Current Month (yymm=0201 and up)
DEACTIVE_EN_MOyymm	Ticket Unassigned From EN in Current Month (yymm=0201 and up)
DEACTIVE_MOyymm	Ticket Unassigned in Current Month (yymm=0201 and up)
DEACTIVE_VR_MOyymm	Ticket Unassigned From SVRA in Current Month (yymm=0201 and up)
DUNS_IDn	DUNS Identification Number (n=1-4)
ELIGIBLE_EVyymm	Ever Eligible for a Ticket as of Current Month (yymm=0201 and up)
ELIGIBLE_MOyymm	Eligible for a Ticket in Current Month (yymm=0201 and up)
EN_EVyymm	Ever Assigned Ticket to EN as of Current Month (yymm=0201 and up)
EN_MO_EVyymm	Ever Assigned Ticket to EN-MO as of Current Month (yymm=0201 and up)
EN_MO_MOyymm	Ticket Assigned to EN-MO in Current Month (yymm=0201 and up)
EN_NAMEn	First, Second, Third, or Fourth EN Name (n=1-4)
EN_OO_EVyymm	Ever Assigned Ticket to EN-OO as of Current Month (yymm=0201 and up)
EN_OO_MOyymm	Ticket Assigned to EN-OO in Current Month (yymm=0201 and up)
EVER_ACTIVE	Ticket Ever Assigned as of December of TRF Year
EVER_ELIG	Ever Eligible as of December of TRF Year
EVER_EN	Ever Assigned Ticket to EN as of December of TRF Year
EVER_EN_MO	Ever Assigned Ticket Under the Milestones + Outcomes Payment System as of December of TRF Year
EVER_EN_OO	Ever Assigned Ticket to EN:OO as of December of TRF Year
EVER_VR	Ever Assigned Ticket to SVRA as of December of TRF Year
EVER_VR_MO	Ever Assigned Ticket to SVRA:MO as of December of TRF Year
EVER_VR_OO	Ever Assigned Ticket to SVRA:OO as of December of TRF Year
EVER_VR_TR	Ever Assigned Ticket to SVRA:TR as of December of TRF Year
FIRST_ASGN_EN_MOyymm	Ticket First Assigned to EN in Current Month (yymm=0201 and up)
FIRST_ASGN_MOyymm	Ticket First Assigned in Current Month (yymm=0201 and up)
FIRST_ASGN_VR_MOyymm	Ticket First Assigned to SVRA in Current Month (yymm=0201 and up)
INUSE_MOyymm	Ticket In-Use (yymm = year/month)
MAIL_MOyymm	Ticket Mailed in Calendar Month (yymm=0201 and up)
MINMAIL	First Ticket Mail Date
PMTTYPE_MOyymm	Payment Type for Active Ticket in Current Month (yymm=0201 and up)
PMTTYPEn	Payment Type (n=1-30)
PROVTYPE_MOyymm	Provider Type for Active Ticket in Current Month (yymm=0201 and up)
PROVTYPEn	Provider Type for Each Ticket (n=1-30)
REASSIGN_EN_MOyymm	Ticket Re-Assigned to EN as of Current Month (yymm=0201 and up)
REASSIGN_MOyymm	Ticket Re-Assigned in Current Month (yymm=0201 and up)
REASSIGN_VR_MOyymm	Ticket Re-Assigned to SVRA as of Current Month (yymm=0201 and up)
TKTASGNDDTn	Ticket Assignment Date (n=1-30)
TKTMAILDDTn	Ticket Mail Date (n=1-30)
TKTTERMDDTn	Ticket Termination Date (n=1-30)
TKTUNASGDTn	Ticket Unassignment Date (n=1-30)
TSSDyymm	Terminated Status - T2 (yymm = year/month)
TSSIyymm	Terminated Status - T16 (yymm = year/month)
VR_EVyymm	Ever Assigned Ticket to SVRA as of Current Month (yymm=0201 and up)
VR_MO_EVyymm	Ever Assigned Ticket to SVRA-MO as of Current Month (yymm=0201 and up)
VR_MO_MOyymm	Ticket Assigned to SVRA-MO in Current Month (yymm=0201 and up)
VR_OO_EVyymm	Ever Assigned Ticket to SVRA-OO as of Current Month (yymm=0201 and up)
VR_OO_MOyymm	Ticket Assigned to SVRA-OO in Current Month (yymm=0201 and up)
VR_TR_EVyymm	Ever Assigned Ticket to SVRA-TR as of Current Month (yymm=0201 and up)
VR_TR_MOyymm	Ticket Assigned to SVRA-TR in Current Month (yymm=0201 and up)

9. Payments to EN Providers

A beneficiary participating in the Ticket to Work program assigns their Ticket to an Employment Network (EN). Depending on whether and how much the beneficiary works after their Ticket is assigned, the EN may be eligible for payment from SSA. These variable delineate the EN payments made.

Variable Name	SAS Label
DUNS_IDn	DUNS Identification Number (n=1-4)
EN_NAMEn	First, Second, Third, or Fourth EN Name (n=1-4)
HAS_M_DATA	Flag for Beneficiaries With Milestone Payments
HAS_O_DATA	Flag for Beneficiaries With Outcome Payments
IEA3yymm	Earned Income Net Loss (yymm = year/month)
M_DTPYyymm	Date Payment (yymm = year/month)
M_PYMTyymm	Payment Amount (yymm = year/month)
M_PYNMyymm	Payment Number (yymm = year/month)
M_TRIGGEREDyymm	Triggered By (yymm = year/month)
M_TYPNUMyymm	M Type Payment (yymm = year/month)
M_TYPYyymm	Type Payment (yymm = year/month)
O_DTPYyymm	Date Payment (yymm = year/month)
O_PYMTyymm	Payment Amount (yymm = year/month)
O_PYNMyymm	Payment Number (yymm = year/month)
O_TRIGGEREDyymm	Triggered By (yymm = year/month)
O_TYPYyymm	Type Payment (yymm = year/month)
SSN	Social Security Number

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IV. DATA USAGE

This chapter contains information on how to use the TRF, including how to extract records from the files and details for certain classes of variables, such as Ticket event dates, differences between benefit "paid" and "due" amounts, calculating age for retirement, and how to determine program participation.

The data in the TRF database is complex. As we gained experience in using this data, we learned many important lessons and these are presented in this chapter. Some general information about the database structure and contents are also presented here. For details on variable names and labels, which are presented in abbreviated form in this chapter, see the TRF10 Data Dictionary.

A. TRF Components and Linkable Files

All TRF components and linkable files are stored on the SSA mainframe or network. To keep the TRF file names easily accessible, particularly when files are updated, the dataset names (DSNs) of all TRF components and linkable files are provided in a "file of filenames", specifically the mainframe text file listed below.

OPDR.TG.PRD.ETTW.TRF10.FILES.NAMES.CURRENT

With the exception of the VRRMS TRF-linkable file, all TRF components and linkable files have copies stored on the SSA mainframe. The copy name is identical to the original name except that the node "TRF10P" is "TRF10C"; examples are included in the file of filenames.

Note: the TRF-Linkable DER file is available only to selected staff at SSA. Contact SSA for further information.

B. Combined Records for Participants

Records in the TRF are constructed so that information on a beneficiary's participation in the SSDI and SSI programs is combined into a single record. The table below shows the status of the variables for SSDI, SSI, and concurrent beneficiaries.

	Demo Component	Annuals Component	Ticket Component	Payments Component
SSDI beneficiaries	All variables populated	SSDI variables: populated for months of participation, missing values otherwise SSI variables: missing values	Records available for Ticket participants only, all variables populated	Records available only for recipients of EN services, all variables populated
SSI beneficiaries	All variables populated	SSDI variables: missing values SSI variables: populated for months of participation, missing values otherwise	Records available for Ticket participants only, all variables populated	Records available only for recipients of EN services, all variables populated
Concurrent beneficiaries	All variables populated	SSDI variables: populated for months of participation, missing values otherwise SSI variables: populated for months of participation, missing values otherwise	Records available for Ticket participants only, all variables populated	Records available only for recipients of EN services, all variables populated

C. Extracting Data from the TRF

The TRF is extremely large. Some components have over 24 million records, making it unwieldy to use as is. Therefore using it generally starts with making an extract, for which there are two approaches. One is to match TRF records to a finder file of SSNs, and the other is to select TRF records according to selection criteria designed for a specific analysis need.

No matter which data extraction method is selected, the programming specifications should include information on how the TRF extracts will ultimately be used. For instance, will multiple years of data be strung together for each selected beneficiary to create a historical series? In that case, the programmer would want to combine data from the annual files rather than keep it separated by year.

1. Extracting Records with a Finder File

The finder file approach is common when records from another file are to be combined with TRF data, such as Medicare participants from a particular state, nationwide Food Stamp recipients, or recipients of services from a state's vocational rehabilitation agency. It is generally more straightforward than extracting records by selection criteria. However, if the finder file contains SSNs obtained outside SSA, say from a state agency or another federal agency, they must be verified using SSA verification techniques before they can be used with the TRF.

The first step (after SSN verification, if needed) is to merge the finder file to one of the TRF components, usually the Demo, keeping all the TRF records that match the finder. Because the TRF has an enormous number of variables, a second step to keep only the variables necessary for the task at hand (plus the SSN) is important. Then merge the extracted records to other TRF components using SSN, e.g. Annual2007, Annual2006, to obtain the remaining variables for the task. If the selected number of records is not large, the extracts can be combined into a single record per SSN. Often however, the extracts are left as separate components, e.g. an extract from the Demo and an extract from Annual 2007, then merge as needed for specific procedures such as a crosstab of program participation status codes from the Annual 2007 component with initial application dates from the Demo component.

2. Extracting Records with Selection Criteria

The selection criteria method is common when the targeted participants are not known ahead of time but their characteristics can be specified. An example is selecting all beneficiaries who were over 17 but under 25 in 2007 and who received a SSDI payment for one or more months during that year. Selection criteria can sometimes be complex and therefore the finder file method is generally easier to implement, however no verification of SSNs is required as with the finder file method.

When using this method, carefully think through the selection criteria at the start. If you specify the selection criteria too narrowly and later find you do not have all the beneficiaries you need for your analysis, you will have to repeat the extraction process from the beginning, which can be quite time-consuming. Take care also not to specify the selection criteria too broadly. If you select far more beneficiaries than you need, the resulting extract files may be too large and unwieldy, leading to extra time and cost for your research task.

Most selection critieria are based on variables that are found in the Demo component, such as birthdate, gender, race, or initial program participation. Therefore the first step usually entails applying the selection criteria to the Demo component, or in some cases, to the Ticket component, keeping only the necessary variables as well as SSN, then merging the selected records with other components such as one or more of the Annuals components to obtain the full set of required variables for the selected records.

When selection critiera are based on variables from multiple files, selection must be done in stages from one component at a time and the results merged. For instance, to select records for beneficiaries who are age 18 to 24 in 2008 and who participated in SSDI during 2008 requires a first pass through the Demo component to select beneficiaries based on age. Then select records from the Annuals 2008 component for beneficiaiaries who participated in SSDI during 2008. Next merge the two sets of extracted records on SSN, keeping only the matches. If data must be extracted from any other component, such as one of the other Annual or Ticket components, use the SSNs from the selected records as a finder file.

If the selected number of records is not large, the extracts can be combined into a single record per SSN. Often however, the extracts are left as separate components and merged as needed for specific procedures such as a crosstab of program participation status codes from the Annual 2008 component with age from the Demo component.

D. Using the Linkable Files with TRF Components

1. Using the RSA TRF-Linkable File with TRF Components

Note: use of the RSA data is available only to projects conducted by SSA that have permission from the Department of Education to use the RSA data.

Each record in the RSA linkable file is identified by the beneficiary's SSN, stored in variable COSSN. All values of COSSN are unique. The RSA file can be merged to any of the TRF components on a one-to-one basis. To merge RSA with the DEMO, Annuals, or Payments components, or the VRRMS linkable file, merge the COSSN field from the RSA file with the SSN field on the TRF components or the VRRMS file. To merge RSA with the TKT components, merge the COSSN field from the RSA file with the COSSN field from the TKT component. As not every RSA participant is also a SSDI or SSI participant, there may be records in the RSA file with no corresponding record in the TRF.

2. Using the DER TRF-Linkable File with TRF Components

Note: use of this data is available only to selected staff at SSA.

3. Using the VRRMS TRF-Linkable File with TRF Components

Each record in the VRRMS linkable file is identified by the beneficiary's SSN, stored in the variable SSN. All values of SSN are unique. The VRRMS file can be merged to any of the TRF components on a one-to-one basis. To merge VRRMS with the DEMO, Annuals, or Payments components, merge the SSN field from the VRRMS file with the SSN field on the TRF components or the VRRMS file. To merge the VRRMS file with the TKT components or the RSA linkable file, merge the SSN field from the VRRMS file with the COSSN field from the TKT components or the RSA file.

E. Chronological Order of Variables with Multiple Occurrences

There are many variables in the TRF10 with multiple occurrences, and these fall in two major categories: 1) monthly variables (these have a "yymm" suffix) and 2) multiple-occurrence variables not related to months (these have an "n" suffix).

1. Order of the "yymm" Variables

These are also referred to as longitudinal or monthly variables and occur in the Annual, TKT Annuals, and Payments files. They are named according to the month and year. For example, the generic variable name DUEDyymm represents "SSDI Benefit Payment Due" while DUED9805 is the specific variable name for "SSDI Benefit Payment Due – 1998 May". The chronological ordering of these variables is self-evident, based on the suffix of the variable itself.

2. Order of the "n" Variables

The so-called "n" variables also have multiple occurrences but are not so clearly tied to a specific point in time. These exist in Demo, TKT Base, and Payments. Examples of "n" variables include:

- ADCn, "T2 Applicant's Disability Cessation (n = 1-12)"
- APSn, "T2 Appeals Date (n=1-12)"
- BDCn, "Basis for Denial Code T2 (n=1-12)"
- BDOFn, "Beneficiary date of filing entry (n=1-15)"
- TOCn, "Type of Claim (n=1-20)"
- TOC_STARTn, "Type of Claim Start Dates (n=1-20)"
- HBICn, "History Beneficiary Identification Code (n=1-25)"
- BDOE-STARTn, "Filing start dates with each BICn (n=1-25)"
- BDOE-TERMn, "Filing end dates with each BICn (n=1-25)"

The suffix "n" indicates the number of occurrences. The number of occurrences is indicated in the variable's label, for example, BDCn, "Basis for Denial Code T2 (n=1-12)", and in this case, it indicates it has 12 occurrences, with the first one named "BDC1", the second "BDC2",

and so on. Some beneficiary records may have data in all 12 occurrences of BDCn while other beneficiary records may have missing values in one or more occurrences.

Some "n" variables have a complementary variable that indicates the number of populated occurrences. For example, the variable TOC_NUM indicates the number of populated occurrences of TOCn, "Type of Claim (n=1-20)". If TOC_NUM contains the value "5", then only the first 5 occurrences of TOCn are populated while the rest have missing data. (Only 6% of beneficiaries actually have more than one TOC occurrence.)

However, unlike the "yymm" monthly variables, the chronological order of the "n" variables is not readily apparent. Some "n" variables may be arranged in ascending order, that is to say, the first occurrence of the "n" variable contains the earliest date, the second occurrence contains the next date after the first, and so on. But this is not always the case. Some "n" variables are arranged in descending order with the first occurrence containing the most recent date and the last populated occurrence containing the earliest date. It is worthwhile examining the contents of the "n" variables to determine the order of the dates or using the MIN SAS function to determine the earliest date before using the data.

In some cases though, an "n" variable does not contain actual dates, for example, TOCn and HBICn, but fortunately there is a corresponding date variable for these variables. For TOCn, the corresponding date variable is TOC_STARTn, "Type of Claim Start Dates (n=1-20)", and for HBICn, it is either BDOE-STARTn, "Filing start dates with each BICn (n=1-25)" or BDOE-TERMn, "Filing end dates with each BICn (n=1-25)". To determine the correct chronological order of the values in TOCn, first examine the dates in TOC_STARTn. If they are in ascending order, then the values in TOC are also in ascending order by date. Also the dates in TOC_STARTn contain the relevant dates for the values in TOC1. For instance, the date in TOC_START1 indicates the relevant date for the value in TOC1. Similarly, to determine the

order of the values in HBICn, examine the dates in BDOE_STARTn. If they are in ascending order, then so are the values in HBICn. The date in BDOE_START1 will contain the relevant date for the value in HBIC1.

F. Date Variables

1. Formats for Date Variables

Date variables from the TRF (such as DOBLONG, TKTMAILDDTn, and APP_RD) are unformatted (or raw) SAS dates expressed as the number of days since (or before) January 1, 1960. To express these variables as meaningful dates, they must be formatted. In SAS, this can be done with a format statement, such as:

FORMAT VAR yymmdd10.

This statement displays the internal SAS numeric value of 16649 as "2005-08-01". Other SAS formats with different display options to suit differing purposes are also available and can be found in SAS documentation. Some TRF date variables already have a SAS format attached to them and these dates will be displayed or printed as a recognizable date but the variable itself will retain the underlying numeric value. When using the TRF date variables with SPSS or other languages, you will likely need to convert date values from the SAS method of representation.

2. Birth Dates

There are multiple birthdate fields in the TRF, the most convenient of which to use is DOBBEST. Multiple birthdate fields exist because many of the SSA administrative files used to construct the TRF contain a birthdate field for the beneficiary. When the various files are combined to form a record in the TRF for each beneficiary, discrepancies among birthdates for some beneficiaries become apparent. For example, a concurrent beneficiary (one who participates in both SSDI and SSI) may have the birthdate "06/01/1957" recorded in the SSDI administrative data but "01/06/1957" recorded in the SSI administrative data. Also some beneficiaries have only partial

birthdates, i.e. the day or month are missing, with the result that the date cannot easily be used for calculations or comparisons.

During construction of the TRF, we created a "best" birthdate field – DOBBEST – to resolve some of these issues. We developed code to compare the birthdates from the various administrative files, identify the date that was most likely to be correct, and to fill in any missing portions with default values. We began by assuming that the Numident birthdate was the most reliable. However, if the Numident birthdate had a valid year but was missing either the day or month, we used birthdates from the SSR, the MBR, and the CER100% Field files, in that order, filled in the missing pieces, and copied the result to DOBBEST. If the entire Numident birthdate was missing, we used the first valid birthdate from the SSR, the MBR, and the CER100% Field files, in that order, to populate DOBBEST.

If this process did not yield a valid date for DOBBEST but the Numident field had a birth year, we set the month and day to "01" and identified the case with a special flag. If the Numident did not have a valid year, we set DOBBEST to missing.

We also retained all original birthdate variables from the TRF, namely DOBMBR (from the MBR), DOBLONG (from the SSR), DOBREM (from the CER100% Field or REMICS files), DOBNUM (from the Numident), and DOBTKT (from the DCF).

3. Death Dates

As with the birthdates, there are multiple death date fields in the TRF, the most convenient of which to use is DODBEST. They exist because many of the SSA administrative files used to construct the TRF contain a deathdate field for the beneficiary. When the various files are combined to form a record in the TRF for each beneficiary, discrepancies among deathdates for some beneficiaries become apparent. For example, a concurrent beneficiary (one who participated in both SSDI and SSI) may have a death date "11/12/2005" recorded in the SSDI administrative data but "11/01/2005" recorded in the SSI administrative data. Another problem occurs if only a partial date

was recorded, with perhaps the day or month missing, with the result that the date cannot easily be used for calculations or comparisons.

During construction of the TRF, we created a "best" death date field – DODBEST – to resolve some of these issues. We developed code to compare any death dates from the various administrative files, identify the date that was most likely to be correct, and to fill in any missing portions with default values. We began by assuming that the Numident death date was the most reliable. However, if the Numident death date had a valid year but was missing either the day or month, we used death dates from the SSR, the MBR, and the CER100% Field files, if available, and in that order, filled in the missing pieces, and copied the result to DODBEST. If the entire Numident death date was missing, we used the first valid death date from the SSR, the MBR, and the CER100% Field files, in that order, to populate DODBEST.

If this process did not yield a valid date for DODBEST but the Numident field had a death year, we set the month and day to "01" and identified the case with a special flag. If the Numident did not have a valid year, we set DODBEST to missing.

We also retained all original death date variables from the TRF, namely BDOD (from the MBR), DEATH_JD (from the SSR), DOD (from the Numident), and DODTKT (from the DCF).

G. Calculating Age

1. Calculating Age at a Point in Time

Selection criteria for extracting records from the TRF often include an age range. A common example is selecting beneficiaries between age 18 and 65. However, while birthdate information is available from the TRF, there is no age variable per se in the database and it must therefore be calculated. To calculate age for beneficiaries in the TRF, these are the three basic steps:

- determine the reference date for the age calculation
- determine whether age should be calculated for deceased beneficiaries
- calculate age from the variable DOBBEST

- ***The reference date:*** To calculate a beneficiary's age, determine the relevant reference date. For example, do you need to know the beneficiary's age as of a specific date such as 12/31/2008? Or age at the time of initial entitlement to SSDI benefits? Or possibly the age at the time they first assigned a Ticket? Consider that a person born in 1970 who enters the SSDI program in 1995 is aged 25 at program entry. If that same person enters the SSI program in 1999, she or he is aged 29 at program entry. In this case, the dates of entry into the programs are reference dates for two separate age calculations. In the case of the selection criteria example above (selection of beneficiaries who are between 18 and 65), a more fully specified version might resemble the following:
  - select beneficiaries who are 18 years and 1 day or more as of January 1 2008 and
  - also less than 65 years old as of December 31 2008

- ***Deceased beneficiaries:*** Next, consider whether you wish to include beneficiaries for whom a death date prior to the reference date has been recorded in the TRF. Continuing the above example (beneficiaries who are 18-65), suppose a beneficiary died at the age of 63 during 2008. If you calculate age without considering the death date, a deceased beneficiary may meet the specified age criteria but could generate unintended consequences, as for example, if the selected records are used to field a telephone survey. To determine whether a death date has been recorded for a beneficiary, use the variable DODBEST. If it is blank or missing, no death date has yet been recorded for the beneficiary. If it is populated, determine whether the death date occurred after the reference date for the age calculation. For the above selection criteria example (between age 18 and 65 in 2008), check either that DOBBEST is blank or that its value is after 12/31/2008. See "Birth Dates" above for more information on construction of DODBEST, as well as descriptions of the various birth date fields in TRF.
- ***Calculate age:*** After determining the appropriate reference date and how to handle deceased beneficiaries, the final step is to calculate age as of the reference date using the variable DOBBEST. In the case of the selection example above, two age variables must be calculated as there are two reference dates needed to determine if the beneficiary was between 18 and 65 during the course of the year, the age as of January 1st 2008 as well as the age as of December 31st 2008.

See "Date Variables" above for general information on date fields in TRF.

2. Calculating Age for Retirement

See Appendix A, "Calculating Retirement Date", for a description of the method of calculating retirement age. A beneficiary's Full Retirement Age (FRA) was previously 65 years, but amendments to the Social Security program in 1983 gradually increased the retirement age from 65 for those born after 1937, gradually increasing it to 67 for those born after 1959. This variable indicates the retirement age based on the beneficiary's birthdate.

H. Benefit Amount Data

Monthly benefit amount data are available separately for SSDI and SSI participation. Categories of benefit variables include the amount due to the beneficiary, the amount actually paid, the federal or state portion, and the amount for dependents. Some benefit amount variables require special handling for accurate use and details are provided below.

1. Formats for Amount Variables

A variety of currency formats are in use for benefit and earnings amounts variables. SSDI benefit amount variables generally include cents, based on SAS formats such as "$$$$.c" or "$$$$.cc". SSI benefit amount variables do not include cents, based on SAS formats such as "$$$$$$" or "$$$". Some of the SSI earnings variables, e.g. IEA1yymm, IEA2yymm, and so on, include cents, based on SAS formats such as "$$$$.cc".

2. SSDI Benefit Amounts

Benefit amount variables for SSDI beneficiaries include the following:

- DUEDyymm – SSDI Benefit Due
- DUEOyymm – SSDI Dependent Benefit Due
- MBAyymm – Federal SSDI Benefit Due
- MBPyymm – Federal SSDI Benefit Paid
- PAYDyymm – PHUS SSDI Benefit Paid
- PAYOyymm – PHUS SSDI Dependent Benefit Paid

a. Difference Between SSDI "Benefit Due" and "Benefit Paid" Variables

The amount due for SSDI beneficiaries is calculated according to a formula that takes into account the beneficiary's work history and can be thought of as the "base" benefit amount. The amount actually paid may differ from the amount due as deductions may be applied to variables to account for Medicare premiums or to recover a previous overpayment. Consequently, Mathematica uses the DUEDyymm variable to determine SSDI benefit amounts for a given month.

b. Use LAFyymm Variable When Using SSDI "Benefit Due" Variables

To accurately determine the monthly benefit amount due to a SSDI beneficiary, it is not enough to use only the benefit due variables – you must also use the payment status code (also known as the "ledger account file status" variable) for the corresponding month, LAFyymm. Our investigations of the SSDI benefit amount due variables and ensuing discussions with SSA staff reveal that the SSDI benefit due variables are often populated even when the beneficiary is not in current pay status. Such situations occur because SSA computer systems often store placeholder values in the benefit due variables for future months and these placeholders are not always removed from the variables when a beneficiary changes from current pay status. For example, suppose a beneficiary was in current pay status for January thru October 2003 with a monthly payment of $720, then terminated from the SSDI program in November 2003. The LAFyymm variables would contain the value "C" for January through October while the November and December LAF variables would contain a code beginning with "T". However, the DUEDyymm variables for all twelve months in 2003 are likely to contain $720, even though the beneficiary should have received no benefit in November or December.

Therefore to accurately determine the amount due for a SSDI beneficiary, SSA staff advise first determining whether a beneficiary is in current pay status in the month in question before using the value from one of the amount due fields. Specifically, use the amount due variable for a given month and year only if the LAF variable for the corresponding month and year contains "C" or "E" in the first position. These two codes indicate the beneficiary is in current pay status.

c. Details for SSDI Benefit Amount Variables

DUEDyymm—SSDI Benefit Due: source variable is the SSA variable MBC from the MBR file, which represents the total benefit amount due to the beneficiary after rounding to the nearest lower dollar but before adjustments are made. SSA refers to this as "amount credited" and indicates it is the basic benefit amount field to use for analysis as other amount fields are affected by

factors such as overpayments or deductions for Medicare. **Consequently Mathematica uses DUEDyymm to determine a beneficiary's total benefit amount for a given month. Always use this variable with LAFyymm for the corresponding month** (see above, "Use LAFyymm Variable When Using SSDI "Benefit Due" Variables").

DUEOyymm—SSDI Dependent Benefit Due*:* similar to DUEDyym and based on the same SSA source variable, MBC from the MBR file. It represents the benefit amount due to the beneficiary for dependents, after rounding to the nearest lower dollar but before adjustments are made. It is calculated by summing only the benefit amounts due to qualifying dependents of the beneficiary. It excludes benefits due to the beneficiary, disabled adult children (DACs), and widows or widowers as those amounts are available in the DUEDyymm variable for the individual in question. Always use this variable with LAFyymm for the corresponding month (see above, "Use LAFyymm Variable When Using SSDI "Benefit Due" Variables").

MBAyymm—Federal SSDI Benefit Due*:* source variable is the SSA variable MBA from the MBR file, which represents the benefit amount due to the beneficiary before rounding or adjustments. It is based on the beneficiary's earnings history, as represented in the beneficiary's Primary Insurance Amount (PIA), and can be thought of as the "base" amount due. Always use this variable with LAFyymm for the corresponding month (see above, "Use LAFyymm Variable When Using SSDI "Benefit Due" Variables").

MBPyymm—Federal SSDI Benefit Paid: source variable is the SSA variable MBP from the MBR file, which represents the benefit amount payable to the beneficiary. It is based on the MBC variable (see DUEDyymm above) with adjustments such as for Medicare premiums or for under or overpayments. It may differ from the actual check amount paid to the beneficiary (see PAYDyymm below). This variable does not need to be used in conjuction with LAFyymm.

PAYDyymm—PHUS SSDI Benefit Paid: this is the actual check amount paid to the beneficiary; it is derived from two SSA variables, Direct Pay (DP – the actual amount of Social

Security benefits disbursed for a specific month) minus Medicare Premium (MD – Part A and Part B premiums) from the Payment History Update System (PHUS). Payment in a given month does not mean the beneficiary is entitled to benefits for that month; the amount in PAYDyymm (or PAYOyymm) may reflect a delayed entitlement for a prior month. To determine entitlement for a specific month, use LAFyymm with DUEDyymm. PAYDyymm does not need to be used in conjuction with LAFyymm.

PAYOyymm—PHUS SSDI Dependent Benefit Paid: similar to PAYDyym and based on the same SSA source variables, DP and MD, from the PHUS. It represents the actual check amount paid to the beneficiary for dependents. It is calculated by summing only the check amounts paid for qualifying dependents of the beneficiary. It excludes check amounts for the beneficiary, disabled adult children (DACs), and widows or widowers as those check amounts are available in the PAYDyymm variable for the individual in question. SSA states: "Presence of payment information does not mean the person is entitled to benefits and a zero amount for payment does not mean the person is not entitled to benefits. These tables reflect payment without concern for entitlement. Some payment events represent monies paid while other events represent monies returned or not received." This variable does not need to be used in conjuction with LAFyymm.

3. SSI Benefit Amounts

Benefit amount variables for SSI beneficiaries include the following:

- DUESyymm – SSI Benefit Due
- FAMTyymm – Federal SSI Benefit Due
- FPMTyymm – Federal SSI Benefit Paid
- PAYSyymm – SSI Benefit Paid
- SAMTyymm – State SSI Benefit Due
- SPMTyymm – State SSI Benefit Paid

Note: users of earlier versions of the TRF files, specifically TRF06 and earlier, should consult Appendix C, "Communications to TRF Users about TRF Data Issues" for a memo that details duplicate payments that were erroneously included for some SSI beneficiraries.

a. Difference Between SSI "Benefit Due" and "Benefit Paid" Variables

The amount due for SSI beneficiaries is calculated by summing federal and state benefits. The amount actually paid may differ from the amount due as retroactive changes may be applied to the "due" amount to reflect changes in income or other factors that affect benefit amount such as living arrangements. Consequently, Mathematica uses PAYSyymm to determine SSI benefit amounts for a given month.

b. Using SSI "Benefit Due" Variables

Unlike the SSDI variables, the SSI "benefit due" variables may be used on their own. The variables are populated only when a payment is actually made, so there is no need to determine whether a beneficiary was in current pay status before using the SSI benefit amount variable.

c. Details for SSI Benefit Amount Variables

DUESyymm—SSI Benefit Due: source is the sum of the SSA variables FEDAMT and SUPAMT (also called FAMT and SAMT) from the SSR-LF, which represents the total federal and state benefit amount for which the SSI beneficiary is eligible.

FAMTyymm—Federal SSI Benefit Due*:* source is the SSA variable FEDAMT (also called FAMT) from the SSR-LF, which represents the federal benefit amount for which the SSI beneficiary is eligible. It can be retroactively adjusted to reflect under or overpayments as a result of changes in income or other factors such as living arrangement that affect benefit amount.

FPMTyymm—Federal SSI Benefit Paid: source is the SSA variable FEDPMT (also called FPMT) from the SSR-LF, which represents the federal benefit amount paid to the SSI beneficiary. Unlike the FAMT variable, it is not retroactively adjusted.

PAYSyymm—SSI Benefit Paid: source is the sum of the SSA variables FEDPMT and STATPMT (also called FPMT and SPMT) from the SSR-LF, which represents the total federal and state benefit amount paid to the SSI beneficiary. Unlike DUESyymm, this variable is not retroactively adjusted.

SAMTyymm—State SSI Benefit Due: source is the SSA variable SUPAMT (also called SAMT) from the SSR-LF, which represents the amount of federally-administered state money the SSI beneficiary is eligible to receive. It can be retroactively adjusted to reflect under or overpayments as a result of changes in income or other factors such as living arrangement that affect benefit amount.

SPMTyymm—State SSI Benefit Paid: source is the SSA variable STATPMT (also called SPMT) from the SSR-LF, which represents the amount of federally-administered state money paid to the SSI beneficiary. Unlike the SAMT variable, it is not retroactively adjusted.

I. Income

There are a variety of income variables in the TRF and it is useful to know a little about them before using them. These data are not of the same reliability or quality as the official income data recorded by the IRS. Income information for SSI beneficiaries is more abundant than for SSDI beneficiaries, particularly in the early years covered by the database.

1. Income Information for SSDI beneficiaries

Two types of income information – historical and current – are available in the TRF for SSDI beneficiaries, although neither is as reliable as the official IRS data.

Current income information: While SSI benefit amounts take into account the beneficiary's current income and assets, SSDI benefit amounts do not, and therefore current income information for SSDI beneficiaries has historically been sparse. The advent of the Ticket to Work program resulted in the need to track beneficiaries' current income in order to make payments to Employment Network providers so in late 2002 SSA added new systems to capture and store self-

reported income, earnings, allowances, and exclusion amounts from the beneficiaries. When possible, the amounts are verified by the case-worker against pay stubs. Some SSA field offices began using these new systems later than others, leading to inconsistencies in the first month of data availability. These new variables are available in the TRF from January 2003 onwards. They should be used with caution as they are not of the same reliability or quality as the official data recorded by the IRS.

Timing of income data: The SSDI program records earnings data when earned, compared to the SSI program which records it when received. For example, a concurrent beneficiary who works in May and is paid on June 5th will have May earnings recorded in the SSDI data but June earnings in the SSI data.

Income amounts are reported in:

- T2GRSAMTyymm: T2 Earnings Gross Amt
- T2NETAMTyymm: T2 Self-Employment Net Income Amt
- ALLGAMTyymm Earnings Alleged Amt (captured both for SSDI and SSI beneficiaries)

Work-related expenses and income exclusions are reported in:

- T2CDNAMTyymm: T2 Special Condition Amt
- T2EXPAMTyymm: T2 Work Expense Amt
- T2SBDYAMTyymm: T2 Earnings Subsidy Amt

For specifics on these variables, consult the TRF Data Dictionary.

Earnings history information: to qualify for SSDI benefits, a worker must have had a work history with earnings above a certain level for a minimum number of quarters. The earnings history information, also known as "primary insurance amount" or PIA, is available within SSA. It is used to calculate the monthly benefit amount due but does not provide a true monthly history of earnings, and generally stops when a beneficiary begins SSDI participation. The amounts represent the beneficiary's highest thirty-five years of earnings, each of which is adjusted, indexed, divided by the

number of months in the period during which there were earnings, and then used to calculate the monthly benefit amount. Prior to 2003, this was the only earnings information available for SSDI recipients from the SSA administrative data. Historical income data are reported in:

- IMEn: Indexed Monthly Earnings
- PIEDn: T2 PIA Effective Date

Each variable has up to 35 occurrences, where "n" represents the specific occurrence, e.g. IME1, IME2, PIED1, PIED2, etc. The PIEDn variable indicates the time period represented by the IMEn variable.

2. Income Information for SSI Beneficiaries

The SSI benefit amount varies according to income and thus income information has long been collected from SSI beneficiaries. The SSI income fields are generally self-reported by the beneficiary and, where possible, verified by the case-worker against pay stubs. Often the reported income is projected income, and may be subsequently revised. When computing the SSI benefit amount, various allowances and exclusions are applied that lower the actual income amount. The amount of the allowance or exclusion is stored in fields beginning with "IEA" and an indicator that the beneficiary participates in the allowance or exclusion program is stored in fields beginning with "IET".

With the advent of the Ticket to Work program and the need to track current income data for all beneficiaries – both SSDI and SSI – in order to make payments to Employment Network providers, SSA added new systems in late 2002 to capture and store self-reported income, earnings, allowances, and exclusion amounts from all beneficiaries. For SSI beneficiaries this resulted in two sets of variables from 2003 onwards that report income and earnings but the information is not necessarily consistent. Furthermore, neither set of income variables is of the same reliability or quality as the official data recorded by the IRS and should therefore be used with caution.

Timing of income data: The SSI program records earnings data when received, compared to the SSDI program which records it when earned. For example, a beneficiary who works in May and is paid on June 5th will have June earnings recorded in the SSI data but May earnings in the SSDI data.

Income amounts captured to determine SSI eligibility are reported in:

- EARNyymm: Earned Income
- EICMyymm: Countable Earned Income
- IEA4yymm: Earned Income Amount from Self-Employment
- IEA6yymm: Earned Income Amount from Wages

Unearned income amounts captured to determine SSI eligibility are reported in:

- IUA1yymm: Unearned Income Amount, SSDI
- IUA3yymm: Unearned Income Amount, Workers' Compensation
- IUA6yymm: Unearned Income Amount, TANF
- UINCyymm: Countable Unearned Income

Allowances or exclusions captured to determine SSI eligibility are reported in:

- IEA1yymm: Earned Income Blind
- IEA2yymm: Earned Income Pass
- IEA3yymm: Earned Income Net Loss
- IEA5yymm: Income IRWE

Indicators of participation in programs for allowances and exclusions captured to determine SSI eligibility are reported in:

- IET1yymm: Earned Income Type Blind
- IET2yymm: Earned Income Type PASS
- IET3yymm: Earned Income Type Net Loss
- IET4yymm: Earned Income Type Self-Employed
- IET5yymm: Earned Income Type IRWE
- IET6yymm: Earned Income Type Wages
- IINDyymm: IRWE Indicator

- PINDyymm: PASS Indicator
- SGAyymm: SGA flag

Income amounts captured under Ticket to Work from January 2003 onwards:

- T16GRSAMTyymm: T16 Earnings Gross Amt
- T16NETAMTyymm: T16 Self-Employment Net Income Amt
- ALLGAMTyymm: Earnings Alleged Amt (captured both for SSDI and SSI beneficiaries)

Amounts of exclusions or allowances captured under Ticket to Work from January 2003 onwards:

- T16EXLAMTyymm: T16 Student Exclusion Amt
- T16EXPAMTyymm: T16 Work Expense Amt
- T16PASAMTyymm: T16 Pass Amt

J. Impairment Codes

1. Variables to Use

To determine a beneficiary's impairment codes at a certain point in time, use the DX1Xyymm and DX2Xyymm series of variables in the TRF, where the suffix "yymm" indicates the year and month a diagnosis was in effect. Please note that the MBRDIG1 and MBRDIG2 variables in the Demo component do not contain information for beneficiaries added to the TRF after 2004 and should rarely be used. They will be dropped from future versions of the TRF. The appropriate impairment code variables in the Demo component for research use are DIGn (primary impairment) and SDIGn (secondary impairment) as well as DIGD and SDIGD for dual-eligible beneficiaries.

2. Primary and Secondary Impairments

Primary and secondary impairment codes can be recorded and reflect the evidence used by SSA to determine whether a person is disabled. However SSA staff generally record only sufficient impairment information to justify disability benefits so if a primary impairment is sufficient to qualify a beneficiary for benefits, any secondary impairment may not be recorded.

3. Impairment Codes Over Time

Impairment information for beneficiaries in SSDI and SSI is recorded by SSA only at select times—initially at disability award and updated later during periodic Continuing Disability Reviews (CDRs), generally every three years. When stored in the TRF, these periodic impairment codes are converted to monthly occurrences. For example, for a beneficiary who entered the rolls in January 2002 with a disability due to a musculoskeletal disorder, the variable DX1X0201 would indicate the relevant code for the musculoskeletal disorder. If the diagnosis was revised during a CDR approximately three years later, perhaps in January 2005, the primary impairment code would be updated in the SSA administrative data, and the TRF variable DX1X0501 would contain the revised impairment code, while the intervening TRF variables—from DX1X0202 to DX1X0412—would contain the initial impairment code. For the months after January 2005, the subsequent variables, DX1X0502 and onwards, would reflect the revised impairment code, up to the time of the next CDR or the month when the beneficiary left the rolls. Converting the periodic codes to monthly occurrences permits a beneficiary's impairment to be identified at any time while they are on the rolls.

4. Coding Schemes and Categorization

SSA records impairment information using 4-digit SSA Impairment Codes, a system of diagnosis codes that has been in use since the mid-1980s. SSA had previously used the ICD-9 coding scheme, some of which are still in use and may be present in TRF data.

Both sets of codes are lengthy, containing many hundreds of codes, and it is therefore useful to group individual diagnosis codes into broader categories for analysis or discussion. There is not currently a single standard at SSA for grouping the diagnosis codes and therefore researchers at Mathematica have sought to develop a grouping scheme suitable for research projects conducted by Mathematica and that accommodates both the SSA Impairment Codes as well as the ICD-9 codes.

The cateogorization scheme is presented in ***Appendix B of this document, "TRF Impairment Code Groupings as of October 2007."***

5. Statutory Blindness

Beneficiaries who are statutorily blind[5] are accorded some special provisions, including employment supports and a higher threshold for considering whether earnings are above the level of Susbtantial and Gainful Activity (SGA).

To determine whether a beneficiary is blind, three data sources are useful: 1) the primary impairment code variables (DX1Xyymm), 2) the secondary impairment code variables (DX2Xyymm), and 3) the date of onset of blindness, BLINDDT. Theoretically only one data source should be sufficient to determine whether a beneficiary is blind but as the data are sometimes inconsistent, it is wise to use all three variables. More details on the inconsistency are provided below in "Inconsistency of Blindess Data".

The DX1Xyymm and DX2Xyymm variables contain impairment (sometimes called "diagnosis") codes for a beneficiary for a given month and year. For example, the variable DX1X0512 reflects the primary impairment code in effect during December 2005, while DX2X0512 reflects a secondary impairment code, if present, for the same month. An impairment code of "3690" indicates blindness or low vision. More information on the impairment code variables is provided below in the section "Impairment Codes" and also in Appendix B of this document, "TRF Impairment Code Groupings As Of October 2007".

a. How to Determine Blindness

To determine if a beneficiary is blind, follow these general steps:

[5] "Statutory blindness" refers to a visual impairment that meets specific technical medical criteria defined by SSA. It is possible for SSA to make a finding of disability based on a visual impairment that does not meet these technical medical criteria. In these cases, the beneficiary is considered disabled rather than blind, and cannot take advantage of any special provisions. In this User Guide, any reference to blindness in the context of SSI or SSDI benefits should be understood to refer to statutory blindness.

- determine whether a reference date is appropriate, and if so, determine the date
- searach DX1Xyymm or DX2Xyymm for the value "3690"
- check if BLINDDT contains a valid date

Determine reference date: consider whether a reference date is relevant. For instance, do you need to know if the beneficiary was blind as of a certain time such as January 2008? Or do you need to know if the beneficiary was blind at the time of an event, such as initial entitlement to SSDI? Or is a reference date not needed at all?

Search through DX1Xyymm and DX2Xyymm: check if specific instances of DX1Xyymm or DX2Xyymm contain the value "3690"; if there is no reference date, check all month-year instances for both variables. For example, if you need to know if the beneficiary was blind before 2008, search for the first occurrence of the value "3690" in all instances of DX1Xyymm and DX2Xyymm for all years and months, starting from December 2007 and progressing backwards. Once the value is found, either in the primary or secondary impairment field, stop searching.

Check BLINDDT: this step may not be necessary, depending on whether the code "3690" was found in the DX1Xyymm and DX2Xyymm variables. If BLINDDT is blank, no onset of blindness has been recorded for the beneficiary. If it contains a valid date, compare it to the reference date, if appropriate. For example, if you need to know if a beneficiary was blind when they entered the SSDI rolls, and the initial date of program participation was June 2005, determine if the date in BLINDDT is before June 2005.

b. Inconsistency of Blindness Data

Not all beneficiaries with a date value in BLINDDT have a corresponding impairment code for blindness in the DX1Xyymm and DX2Xyymm fields, and vice versa. Analysis conducted in 2006 showed that a larger than expected number of beneficiaries with a valid date in BLINDDT had no corresponding impairment code for blindness in the primary or secondary impairment fields. This situation was thought to reflect the fact many beneficiaries who are blind have a number of other

significant disabilities which are sufficient to qualify the beneficiary for benefits, and thus these other disabilities are recorded in the impairment code fields while the blindness is indicated by entering a date in the BLINDDT field. Another factor is that a beneficiary may become blind after their initial qualification for disability benefits, for instance, from the progression of diabetes. Because the subsequent onset of blindness from diabetes would not change the beneficiary's entitlement to disability benefits, it may not be recorded in the impairment codes.

K. Program Participation and Disability Onset

Many research analyses center on the question of when a beneficiary first became disabled or first participated in SSDI or SSI. These events do not necessarily coincide.

1. Disability Onset

To determine the earliest date of onset of a beneficiary's date of disability, use the following:

- for SSDI beneficiaries, use the first occurrence of DDOn (Date of Disability Onset), where n ranges from 1 to 12
- for SSI beneficiaries, use MINELGRD (T16 First SSI Eligibility Date)

2. Date of Initial Entitlement to Benefits

For SSDI beneficiaries, the MBR data has two sources of the Date of Initial Entitlement to Benefits: 1) the DOEI header variable and, 2) the earliest date stored in the variable series ENTDATn which records entitlement dates for up to twelve possible periods of eligibility. In approximately 93% of the selected MBR records, DOEI and the earliest value from ENDATn contain the same date. In the remainder they do not, and there does not seem to be a consistent logic for the difference. The earliest date value from ENTDATn may be a more reliable source for date of initial benefit entitlement.

For SSI beneficiaries, there is no comparable entitlement date; instead first payment dates are used (see section below, "Initial SSDI or SSI Program Participation (First Payment Date)").

3. Initial SSDI or SSI Program Participation (First Payment Date)

It is not as simple as it seems to determine when a beneficiary first began to participate in the disability program. A beneficiary may have become disabled many months or even years before they applied for disability benefits, therefore the disability onset date should not be used to indicate the start of program participation. Consequently the first payment date for SSDI or SSI benefits is often used to determine when a beneficiary began participating in the disability program.

a. SSDI Beneficiaries

Using DOEI (Date of Initial Entitlement) (see note on DOEI below in section "Date of Initial Entitlement to Benefits") will indicate the date of first entitlement to benefits but that is not the same as initial participation or even the first payment date. The monthly LAFyymm variable (indicates monthly SSDI payment status) codes might seem to be appropriate as this field can show when a beneficiary first entered current pay status, but this approach can also be misleading as many SSDI beneficiaries receive retroactive payments when they first become eligible for benefits. For example, someone receiving benefits for the first time in September 2004 may also receive retroactive payments made in September for the previous three months, and therefore the monthly LAF codes would be retroactively filled to show current payment status beginning in June 2004, three months before the beneficiary actually received a benefit payment. The DUEDyymm field would also be retroactively filled in to show the benefit amount that was due to the participant.

Therefore to determine when the beneficiary actually received their first benefit payment requires the use of the PHUS data, a file that reflects actual disbursement dates and amounts. Specifically, to determine the first payment date:

- first note the value of DOEI
- then search for the first occurrence of PAYDyymm (PHUS SSDI Benefit Paid) with a positive value and where LAFyymm for the same month contains a value that indicates current pay status (C or E in the first position).

And to find the first payment date in the current entitlement period, substitute DOEC (Date of Current Entitlement) for DOEI in the above suggestions.

b. SSI Beneficiaries

On the surface it appears to be much easier to determine the first payment date for SSI beneficiaries than for SSDI beneficiaries. The variable MINFRSTP (T16 First Application, first SSI payment date) contains the initial payment date for the earliest available entitlement period. However a word of caution is in order - SSA periodically over-writes the data from which this variable is drawn (FIRST-PAY-DTE in the SSR) and sometimes the initial payment date for the first entitlement period is replaced by the initial payment date for a subsequent entitlement period. To illustrate, suppose a beneficiary has three entitlement periods on record in the SSR spanning a period of twenty-five years. In this example, the first entitlement period began twenty-five years ago, the second began twenty years ago, and the third began two years ago. The date of the initial payment for all three entitlement periods is stored in the SSR, and the earliest occurring initial payment date represents the initial payment date for the first entitlement record, twenty-five years ago. Later the SSR data are updated, and perhaps because the earliest entitlement period began such a long time ago, the update routine over-writes the data for the earliest entitlement period. After the over-write all that remains are the two most recent entitlement periods, with the initial payment date for the first entitlement period occurring twenty years ago. In the absence of any other information, it appears that this beneficiay's initial payment date occurred twenty years ago, not twenty-five years ago. In actuality, the earliest initial payment date from the SSR reflects the earliest **available** payment date, which is not necessarily the date the SSI beneficiary first received a payment.

4. Ongoing SSDI or SSI Program Participation

Participation in SSDI or SSI can vary from month to month as participants sometimes move on and off the rolls according to changing circumstances such as trial work periods. In other words, once on the rolls, a participant will not remain on the rolls indefinitely. Therefore to determine a

beneficiary's participation status at a given point in time, use participation variables specific to that time.

a. SSDI Beneficiaries

To determine the participation status for a SSDI beneficiary, use the SSDI payment status code variable (also known as the "ledger account file status" variable), LAFyymm, for a specific month or range of months. For example, to determine participation status for a SSDI beneficiary in 2003, use LAF0301 through LAF0312. If a beneficiary was in current pay status for January through October 2003 then terminated from the SSDI program in November 2003, the LAFyymm variables for the year 2003 would contain values as shown in the table below.

Variable	LAF0301	LAF0302	LAF0303	LAF0304	LAF0305	LAF0306	LAF0307	LAF0308	LAF0309	LAF0310	LAF0311	LAF0312
Value	C	C	C	C	C	C	C	C	C	C	T	T

b. SSI Beneficiaries

To determine the participation status for a SSI beneficiary, use the SSI payment status code variable, PSTAyymm, for a specific month or range of months. For example, to determine participation status for a SSI beneficiary in 2003, use PSTA0301 through PSTA0312. If a beneficiary was in current pay status for January thru October 2003 then suspended from the SSI program in November 2003, the PSTAyymm variables for the year 2003 could contain values as shown in the table below.

Variable	PSTA0301	PSTA0302	PSTA0303	PSTA0304	PSTA0305	PSTA0306	PSTA0307	PSTA0308	PSTA0309	PSTA0310	PSTA0311	PSTA0312
Value	C01	C01	C01	C01	C01	C01	C01	C01	C01	C01	N07	N07

L. Race and Ethnic Categories

The TRF currently contains two race variables, RACE and RP. RACE (for SSI and SSDI beneficiaries) has the following mutually exclusive categories:

- A - Asian American, Pacific Islander
- B - Black (not Hispanic)
- H - Hispanic
- I - North American Indian/Alaskan native
- W - White (not Hispanic)
- O - Other
- U – Unknown

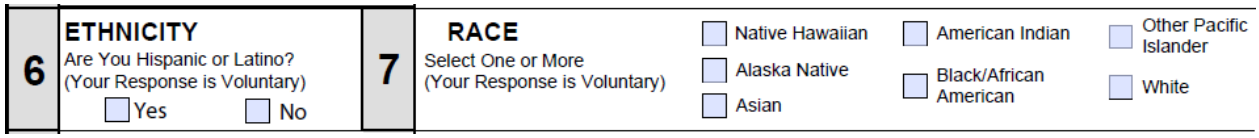
The variable RP (for SSDI beneficiaries only) has the following mutually exclusive categories:

- B - Black (not Hispanic)
- W - White (not Hispanic)
- O - Other
- U - Unknown

These mutually exclusive categories mean that a beneficiary is identified by only a single race designation, even for persons of mixed racial heritage. Additional binary variables are constructed from RACE for each category, thus:

- ASIAN is set to 1 if RACE = "A", otherwise 0
- BLACK is set to 1 if RACE = "B", otherwise 0
- HISPANIC is set to 1 if RACE = "H", otherwise 0
- NAINDIAN is set to 1 if RACE = "I" , otherwise 0
- OTHER is set to 1 if RACE = "O" , otherwise 0
- UNKNOWN is set to 1 if RACE = "U" , otherwise 0
- WHITE is set to 1 if RACE = "W" , otherwise 0

Like many federal agencies, SSA has begun to capture additional data on race and ethnic information but those data are not yet available in the administrative files used to build the TRF. The main source for the expanded race and ethnic information for SSA participants is the application for a Social Security card, which has included additional (and optional) questions for race and ethnicity since 2003. The relevant section of the form is shown below:



http://www.ssa.gov/online/ss-5.pdf

While the actual race and ethnic categories themselves have not changed, the form now offers the ability to select more than one category, as well as to identify ethnicity separately from race. Whereas previously someone of mixed heritage, say Black and white, and also of Hispanic ethnicity, had to choose either the "Black", "White", or "Hispanic" category, the new form allows the selection of all three.

However, as the majority of applications for Social Security cards are filed upon the birth of a child, it is likely to be some years before additional race and ethinc information is available for significant numbers of SSA beneficiaries. In addition, for the TRF to capture the expanded information, the administrative files used to construct the TRF must also be revised to include the expanded information. When that occurs, the binary variables in the TRF can reflect the multiple selections for race and ethnic categories chosen by a beneficiary.

M. Ticket Event Dates

The SSA administrative data provides a history of events for Tickets received by a participant in the Ticket to Work (TTW) program. Ticket events begin when a participant is selected for inclusion in the TTW program, after which a Ticket is mailed to the participant, who can then choose to assign the Ticket to a provider of employment services. The Ticket can optionally be unassigned and re-assigned to another provider. While the beneficiary is in work status, the Ticket remains active. When the participant finishes receiving benefits for reasons **other** than work, i.e. medical recovery, retirement, death, or does not meet timely progress requirements, the Ticket is terminated. If a participant has a subsequent period of disability eligibility, they can receive another Ticket, and event dates for each subsequent Ticket are also tracked. For example, if a beneficiary receives disability benefits for cancer, recovers, and then later has a new period of disability benefits due to an injury,

there would be two periods of disability and two Tickets, with the first Ticket showing a terminated status and the second Ticket an active status.

In the SSA administrative data, data are stored on a "per Ticket" basis. For each Ticket, All mail dates, assignment and unassignment dates, status codes, and status changes dates for a given Ticket are stored together. If a beneficiary has two periods of disability and therefore has received two Tickets, the SSA administrative data will contain two sets of Ticket data.

In contrast, data in the TRF is stored on a "per Ticket **assignment**" basis. For a beneficiary who has received two Tickets and assigned each Ticket once, the TRF will contain two sets of "Ticket assignment" data, like the SSA data. But if the beneficiary assigned the first Ticket twice and the second Ticket once, the TRF will contain three sets of "Ticket assignment" data. It is important to understand the distinction between the SSA and the TRF methods for storage of Ticket information so as to prevent accidental over-counting of Tickets when using data from the TRF.

This section provides more information about Ticket event information, including some potential pitfalls, explains how the data are stored in the TRF, and illustrates Ticket events more fully.

a. Sequence of Ticket Event Dates

Ticket events are expected to follow one another in logical sequence after the participant has been selected for the Ticket program: 1) Ticket is mailed to participant; 2) participant assigns Ticket to provider; 3) a status code of "I" (for in use) is recorded when the Ticket is assigned, along with the pertinent Status Effective Date, then 4) a status code "T" (for terminated) is recorded when services are completed, also with its status effective date. Below is a conceptual example of the SSA administrative data for the Ticket event dates for a participant, showing a ticket was mailed in Februrary 2005, assigned in July 2005, and terminated – perhaps due to medical recovery – in February 2007:

Example 1 Conceptual SSA Variables

Ticket 1			
Mail Date	Assign Date	Status Code	Status Effective Date
Feb 05	Jul 05	T	Feb 07

Sometimes a participant re-assigns a Ticket to another provider, in which case the cycle includes two intermediate steps, unassignment, and reassignment. Below is such an example:

Example 2 Conceptual SSA Variables

Ticket 1					
Mail Date	Assign Date	Unassign Date	Re-assign Date	Status Code	Status Effective Date
Feb 05	Jul 05	Aug 05	Nov 05	T	Feb 07

A participant with multiple periods of eligibility may receive more than one Ticket, shown in the example below. Note that the first Ticket is terminated before the cycle begins again for the second Ticket and that the current status of the second ticket is assigned, as indicated by the "I" for Status Code.

Example 3 Conceptual SSA Variables

Ticket 1				Ticket 2			
Mail Date	Assign Date	Status Code	Status Effective Date	Mail Date	Assign Date	Status Code	Status Effective Date
Feb 05	Jul 05	T	Feb 07	Feb 08	Aug 08	I	Jan 11

b. Anomalies in Ticket Events in the Administrative Data

Occasionally though, the administrative data that documents the Ticket events may exhibit some anomalies, such as the one below, in which the first assignment, status code, and date fields contain no data. Furthermore, the value for the second assignment date field occurs prior to the

second mail date. The likely scenario here is that the second assignment date is actually the first assignment date and possibly likewise for the second status code and status date.

Example 4 Conceptual SSA Variables

Ticket 1				Ticket 2			
Mail Date	Assign Date	Status Code	Status Effective Date	Mail Date	Assign Date	Status Code	Status Effective Date
Feb 05				Apr 07	Jul 06	T	Jan 08

Another example is shown below, in which the first assignment date occurs after the second mail date; in this case it is likely that the first Ticket was never assigned and that the first assignment date should actually be the second assignment date. While these anomalies are relatively rare, they do occur.

Example 5 Conceptual SSA Variables

Ticket 1				Ticket 2			
Mail Date	Assign Date	Status Code	Status Effective Date	Mail Date	Assign Date	Status Code	Status Effective Date
Feb 05	Jul 08			Mar 07			

c. Structure of Ticket Event Dates in TRF

During construction of the TRF, dates for all Ticket entries are numbered and re-organized within a reference system, based on Ticket assingments. Each numbered Ticket assignment entry consists of the mail date, assignment date, unassignment date (often blank), and termination date, using the following variables, each of which can have up to 30 occurrences:

- TKTMAILDDT1 to TKTMAILDDT30
- TKTASGNDDT1 to TKTASGNDDT30
- TKTUNASGDT1 to TKTUNASGDT30
- TKTTERMDDT1 to TKTTERMDDT30

The Status Code variable for Ticket data from the SSA administrative data is not stored in the TRF. Most participants have fewer than 30 Ticket assignment entries and the number of entries for each participant is reflected in the variable NOE (Number of Entries). Therefore a TRF record where NOE = 1 would use the following variables to store the SSA administrative Ticket data:

- TKTMAILDDT1
- TKTASGNDDT1
- TKTUNASGDT1
- TKTTERMDDT1

The remaining occurrences, 2-30, for each of the four variables would be blank. A record where NOE = 2 would use the following TRF variables:

- TKTMAILDDT1 and TKTMAILDDT2
- TKTASGNDDT1 and TKTASGNDDT2
- TKTUNASGDT1 and TKTUNASGDT2
- TKTTERMDDT1 and TKTTERMDDT2

The remaining occurrences, 3-30, for each of the four variables would be blank.

To illustrate the difference between the structure of the data in the SSA administrative file and that in the TRF, let us use the same SSA administrative data as in Example 1 above, shown here again for convenience:

Example 6 Conceptual SSA Variables

Ticket 1			
Mail Date	Assign Date	Status Code	Status Effective Date
Feb 05	Jul 05	T	Feb 07

In the TRF, it would look like the record below; all 30 occurrences for each of the four Ticket date variables are present in a single long record. Note that in this example there would be just one Ticket assignment entry, with data in just the first occurrence of three variables. The first unassignment date would blank, as would all variables for occurrences 2-30.

Example 7 TRF Variables

NOE	TKTMAILDDT1	TKTMAILDDT2 thru TKTMAILDDT30	TKTASGNDDT1	TKTASGNDDT2 thru TKTASGNDDT30	TKTUNASGDT1	TKTUNASGDT2 thru TKTUNASGDT30	TKTTERMDDT1	TKTTERMDDT2 thru TKTTERMDDT30
1	Feb 05		Jul 05				Feb 07	

Now let us consider the case in which a participant works with two providers, using the same administrative data from Example 2 from above, shown here again for convenience:

Example 8 Conceptual SSA Variables

Ticket 1					
Mail Date	Assign Date	Unassign Date	Re-assign Date	Status Code	Status Effective Date
Feb 05	Jul 05	Aug 05	Nov 05	T	Feb 07

In the TRF, there would be two Ticket assignment entries with the remainder blank; note that although there is only a single mail date and termination date in the SSA administrative data, in the TRF, the Ticket assignment date will be stored as one entry and the Ticket re-assignment date as a second entry.

Example 9 TRF Variables

NOE	TKTMAILDDT1	TKTMAILDDT2	TKTMAILDDT3 thru TKTMAILDDT30	TKTASGNDDT1	TKTASGNDDT2	TKTASGNDDT3 thru TKTASGNDDT30	TKTUNASGDT1	TKTUNASGDT2	TKTUNASGDT3 thru TKTUNASGDT30	TKTTERMDDT1	TKTTERMDDT2	TKTTERMDDT3 thru TKTTERMDDT30
2	Feb 05	Feb 05		Jul 05	Nov 05		Aug 05			Feb 07	Feb 07	

And for the case in which a participant receives more than one Ticket, using the same data from Example 3 from above, shown here again for convenience:

Example 10 Conceptual SSA Variables

Ticket 1				Ticket 2			
Mail Date	Assign Date	Status Code	Status Effective Date	Mail Date	Assign Date	Status Code	Status Effective Date
Feb 05	Jul 05	T	Feb 07	Feb 08	Aug 08	I	Jan 11

For this example also, there would be two populated occurrences of each variable in the TRF, with the rest blank.

Example 11 TRF Variables

NOE	TKTMAILDDT1	TKTMAILDDT2	TKTMAILDDT3 thru TKTMAILDDT30	TKTASGNDDT1	TKTASGNDDT2	TKTASGNDDT3 thru TKTASGNDDT30	TKTUNASGDT1	TKTUNASGDT2	TKTUNASGDT3 thru TKTUNASGDT30	TKTTERMDDT1	TKTTERMDDT2	TKTTERMDDT3 thru TKTTERMDDT30
2	Feb 05	Feb 05		Jul 05	Aug 08		Aug 05			Feb 07	Jan 11	

d. Anomalies in Ticket Events in the TRF

Now let us consider what happens to anomalous Ticket data when it is stored in the TRF. For the first example, we examine the same data from Example 4 above, in which the value in the second assignment date field occurs prior to the second mail date. The example is shown here again for convenience:

Example 12 Conceptual SSA Variables

Ticket 1				Ticket 2			
Mail Date	Assign Date	Status Code	Status Effective Date	Mail Date	Assign Date	Status Code	Status Effective Date
Feb 05				Apr 07	Jul 06	T	Jan 08

In the TRF, such a case would look like the data below: note that although it is likely that the second assignment date should pair with the first mail date, we cannot be sure it is so and therefore **we do not attempt to apply corrections to the data.**

Example 13 TRF Variables

NOE	TKTMAILDDT1	TKTMAILDDT2	TKTMAILDDT3 thru TKTMAILDDT30	TKTASGNDDT1	TKTASGNDDT2	TKTASGNDDT3 thru TKTASGNDDT30	TKTUNASGDT1	TKTUNASGDT2	TKTUNASGDT3 thru TKTUNASGDT30	TKTTERMDDT1	TKTTERMDDT2	TKTTERMDDT3 thru TKTTERMDDT30
2	Feb 05	Apr 07			Jul 06		Aug 05				Jan 08	

Finally, let us consider the last anomaly shown above, using the same data as in Example 5 above, in which the date for Assignment Date 1 occurs after the date for Mail Date 2, perhaps indicating the first Ticket was never assigned. The example is shown here again for convenience:

Example 14 Conceptual SSA Variables

Ticket 1				Ticket 2			
Mail Date	Assign Date	Status Code	Status Effective Date	Mail Date	Assign Date	Status Code	Status Effective Date
Feb 05	Jul 08			Mar 07			

In the TRF, this data anomaly would look like the data below. As we cannot be sure that the first assignment date actually belongs with the first Ticket, we therefore do not attempt to apply corrections to the data.

Example 15 TRF Variables

NOE	TKTMAILDDT1	TKTMAILDDT2	TKTMAILDDT3 thru TKTMAILDDT30	TKTASGNDDT1	TKTASGNDDT2	TKTASGNDDT3 thru TKTASGNDDT30	TKTUNASGDT1	TKTUNASGDT2	TKTUNASGDT3 thru TKTUNASGDT30	TKTTERMDDT1	TKTTERMDDT2	TKTTERMDDT3 thru TKTTERMDDT30
2	Feb 05	Mar 07		Jul 08								

e. Cautions for Using Ticket Event Dates from the TRF

The above examples show that when using the Ticket event date variables, one should expect that a small number of date values will be out of alignment with others and therefore sequences of events should be carefully examined before use for research purposes.

V. CONSTRUCTION METHODS AND DEVELOPMENT HISTORY

A. Outline of Steps in Building the TRF

The TRF database is constructed by Mathematica on an annual update cycle. Each year the previous version is re-built from scratch to include all beneficiaries who were in the previous version, as well as including new beneficiaries who entered the SSDI or SSI rolls during the most recent year (the data year) and to update records for beneficiaries already in the TRF. This section provides a general description of the steps to build the TRF. Additional detail on construction methods is available in the companion document, the TRF Construction Guide, updated for each TRF processing year. Recall that the term "data year" indicates the year through which the given TRF file contains data. The TRF10 file, for example, includes data through December 2010 so the data year for that file is 2010. The term "processing year" indicates the year a particular TRF file is built and it is generally the year immediately following the data year. Thus the processing year for the TRF10 file is 2011.

1. Assemble DBAD Files

The first step is to determine determine the new beneficiaries who entered the SSDI program during the data year, accomplished by processing the twelve monthly DBAD files that represent the selected months (for TRF10, the data year was 2010 and therefore the twelve selected DBAD files contained data for January 2010 to December 2010). For each DBAD file, we convert it to SAS format and select records for beneficiaries participating in the SSDI program. Selection criteria are based on the program participation variables BIC (Beneficiary Identification Code), LAF (Ledger Account File Status, TOC (Type of Claim), and beneficiary's age. Further detail on selection criteria is presented in Chapter II, Section D: "Criteria for Selection". For records for primary beneficiaries (BIC = "A") we use the CAN (Claim Account Number) to populate the SSN field in the TRF. For records for auxillary beneficiaries (where BIC = "C" or "W"), we use the BOAN (Beneficiary's Own Account Number) to populate the SSN field, but we also keep the CAN to facilitate later linking

with other SSA administrative data. We delete any records with blank CANs as these cannot be matched to other SSA administrative files. We then de-duplicate on SSN combined with BIC, rather than on SSN alone which allows us to retain multiple records for dual-eligible beneficiaries, i.e. primary beneficiaries who are entitled to benefits from their own account but are also entitled to dependent benefits from the account of another primary beneficiary. At the end of this step, we have twelve files containing records for selected SSDI beneficiaries from the data year.

2. Combine DBAD Data

Next we combine the twelve files of records selected and processed from the DBAD files to create the SSDI finder file. We also keep selected variables for later processing to build longitudinal variables for the TRF Annuals.

3. Assemble CER100% Field Files

As with the SSDI beneficiaries, the first step is to determine determine the new beneficiaries who entered the SSI program during the data year, accomplished by processing the twelve monthly CER100% Field files that represent the selected months (for TRF10, the data year was 2010 and the twelve selected CER100% Field files contained data for January 2010 to December 2010). For each CER100% Field file, we convert it to SAS format and select records for beneficiaries participating in the SSI program. Selection criteria are based on the variables PSTAT (Payment Status), MFT (Master File Type), DENCDE (Denial Code), and age. Further detail on selection criteria is presented in Chapter II, Section D: "Criteria for Selection". As each SSI record is listed under the beneficiary's own SSN (PAN), we set SSN to PAN for the identifier for SSI beneficiaries in the TRF At the end of this step, we have twelve files containing records for selected SSI beneficiaries from the data year.

4. Combine Data from CER100% Field Files

Next we combine the twelve files of records selected and processed from the CER100% Field files to create the SSI finder file. We also keep selected variables for later processing to build longitudinal variables for the TRF Annuals.

5. Create Finder Files

We combine the SSNs from the previous TRF version with the lists of SSNs (derived from the CANs, BOANs, and PANs) from the DBAD and CER100% Field files in the steps above to build a finder of all SSNs for inclusion in the new TRF. Then we identify the type of beneficiariy for each SSN: SSDI, SSI, or concurrent, and output the SSNS into separate finders files for SSI and SSDI. Each finder file also contains the SSNs for the concurrent beneficiaries. In other words, each concurrent beneficiary is output to the SSDI finder file as well as the SSI finder file. We also create combined files of all SSNs, to be used as finders for the Numident and earnings data. We also create a combined file of SSNs for extracting records from 831 & 832/833 files for SSDI and SSI beneficiaries, creating SSN from the CAN for SSDI beneficiaries and from the PAN for SSI beneficiaries.

6. Submit SSDI Finder File

We submit the SSDI finder to the MBR finder process and request "CAN Day 1 processing", using a custom layout for the extract format that includes PHUS data. The "CAN Day 1 processing" routine captures all the MBR records, both primary and auxiliary, associated with each CAN.

7. Submit SSI Finder File

We submit the SSI finder to the SSI-LF finder process. Data are returned from the finder process in segments which must be pieced together to build longitudinal data for a given beneficiary.

8. Submit Other Finder Files

We submit the combined finder (for all SSDI and SSI beneficiaires) to the Numident finder process and also submit it to obtain earnings from 1990 onwards from the SER. Because access to

the DER data is available only to select SSA staff, the finder results from the DER will be stored in a location accessible only to those staff.

9. Process MBR Data

The first step is to SAS load all the returned MBR data, then to process it in steps.

1. Step 1: We sort the returned MBR records by CAN and BIC, then for each primary beneficiary, we sum the benefit amounts paid to any auxiliary beneficiaries. Only the records for primary beneficiaries are output and they contain the total benefits paid to any auxiliaries.
2. Step 2: We process the PHUS data in a similar fashion as above.
3. Step 3: We read the returned MBR records a second time, this time to extract demographic and one-time data, such as birthday, as well as longitudinal data, such as T2 application dates and PIA amounts, for eventual storage in the TRF Demo component. We also extract longitudinal data such as monthly payment status and benefit amount due for 1994 through the data year, determining the month and year the longitudinal data belongs to, then storing it in longitudinal fields named accordingly. We process the PHUS data in a similar fashion and combine it with the longitudinal data from the MBR. The file is sorted on the SSN/BIC combination, then de-duplicated by SSN. For records with multiple SSN/BIC combinations, we keep the BIC from the first occurrence.
4. Step 4: Next we process the variables for dual-eligible SSDI beneficiaries, i.e. for a beneficiary entitled to benefits based on their own primary SSDI record as well as benefits from another primary SSDI beneficiary, such as a spouse or parent's SSDI record, and add it to the file produce in Step 3 above.
5. Step 5: We attach the dependent amounts from Steps 1 and 2 to the records in the file produced by Steps 3 and 4.The resulting data are set aside for later inclusion in the Annual components
6. Step 6: In the final step, we create a crosswalk of SSNs, CANS, BICs to facilitate later processing of the 831 & 832/833 data.

10. Process SSI-LF Data

The first step is to SAS load the sections of SSI-LF returned records, then combine sections for each SSN by date. We process the combined records to build one record for each SSN, transforming the data into monthly occurrences. We extract demographic and non-monthly data such as birthdate and SSI application dates for eventual storage in the TRF Demo component. We also extract monthly data such as living arrangements, benefit paid amounts, and payment status codes for 1994 through the data year, determining the month and year the data belongs to, then

storing it in longitudinal fields named accordingly. The processed SSI-LF data are then set aside for building the TRF Annual components later.

11. Process Numident Data

We SAS load the Numident returned records and extract variables needed later for TRF.DEMO.

12. Process 831 & 832/833 Data

Using the list of SSNs created in Step 5 above, we extract and combine records from the 831 & 832/833 files, which contain data for both SSDI and SSI beneficiarys. SSDI records in these files are identified only by CAN/BIC, which means that the record for an auxiliary SSDI beneficiary contains the CAN of the primary, not the BOAN of the auxiliary, which can hinder proper linking with other files. Therefore we create a linking file for these records using the crosswalk generated during MBR processing to attach BOANs to the CAN/BICs. For SSI beneficiares, we build histories of stop and start dates and set them aside for adding to the TRF Demo component. For Both SSDI and SSI beneficiaries, we build longitudinal variables for disability adjudication, diagnosis codes, MIE indicators, and levels of education, and set those aside for adding to the Annual files.

13. Create TRF Demo Data

The Demo is created from scratch for each TRF version by combining the demographic and non-monthly data for SSDI and SSI beneficiaries that was processed in earlier steps, creating a single record for each beneficiary. For a SSDI-only beneficiary, the SSI fields in the Demo record will be blank, while for an SSI-only beneficiary, the SSDI fields will be similarly blank, and for a concurrent beneficiary, all fields will be populated. For some fields with multiple sources of data, such as birthdate which is available from both the MBR and the SSR, the Demo will contain all versions of the birthdate, even if there are discrepancies. For these variables, we employ algorithms to determine the "best" field, which is captured as an additional variable in the Demo.

14. Create Left-Due-to-Work Flags

Next we build the monthly flags for Left-Due-to-Work (LDW), creating separate series of flags for LDW status in SSDI and SSI programs based on monthly program participation. From the SSDI and SSI flags, we also create a series of "combined" LDW flags which indicate LDW status in both programs overall simultaneously. We set the data aside for subsequent merging with Annual files. For more details on the construction of the LDW flags, consult Chapter VI, Indicators for "Left Due to Work", in this document.

15. Create TRF Annual Data

Every Annual file is created from scratch for each TRF version by combining the longitudinal data built from the MBR, SSI-LF, and 831 & 832/833 files processed in the preceding steps. We create a new Annual file for each year from 1994 to the data year, each file containing one record for each beneficiary and combining SSDI and SSI data. For a SSDI-only beneficiary, the SSI fields in an Annauls record will be blank, while for an SSI-only beneficiary, the SSDI fields will be similarly blank, and for a concurrent beneficiary, all fields will be populated. We add on the monthly LDW flags created earlier. Each record in each Annual component has a one-to-one match to a record in the TRF Demo component.

16. Create TRF Ticket Data

The Ticket data for TRF is processed separately from that for the TRF Demo and Annuals. The first step is to SAS load the various DCF DB2 tables that hold Ticket data. For each DCF table, the programs loop through multiple Ticket records for each beneficiary, such as records for Ticket mailing and assignment dates, then build a single record for each SSN with monthly flags for Ticket events, including Ticket mailing dates, Ticket assignment dates, and types of providers of

employment services.[6] Using the DCF table of monthly Ticket data, we construct each beneficiary's monthly program title (SSDI or SSI) from the effective date of the program participation until a recorded program participation change.

Note that not all SSNs in the Ticket data will match to the TRF Demo and Annual components, and vice versa, for three main reasons: 1) We usually process the DCF DB2 tables for creating the TRF Ticket components several months after records are extracted from the DBAD and CER100% Field files used to build TRF.DEMO and therefore records added recently to the DCF may not have a counterpart in the DBAD or CER100% Field files; for example, a beneficiary who begins SSDI participation in February 2011 and has a Ticket mailing date in March 2011 will not have records in the DBAD files for 2010 and therefore will have a record in the TKT component of TRF10 but will not have a corresponding record in the DEMO; 2) A beneficiary who participated in SSDI from 1997 to 1999, before the Ticket program began, will appear in the TRF.DEMO component but not in the Ticket data as the Ticket program did not begin until 2002; and 3) while all Ticket participants in the DCF are selected for inclusion in the Ticket data, records from the DBAD and CER100% Field files are selected only if the beneficiary meets certain age and program participation criteria.

Note about dropped Ticket records: Some Ticket records that were in previous versions of the TRF database do not appear in the current version. The reason is that the DCF, from which the Ticket data is derived, is periodically cleaned and some records are removed from the DCF for various reasons. An example is the deletion of a Ticket record that was generated but was later found to have been generated in error because the intended Ticket participant did not meet all the Ticket eligibility criteria. Such a record would exist in earlier TRF versions but will not appear in TRF versions that were built after the DCF was cleaned and that record was deleted from the DCF.

[6] See Chapter IV, Section N, "Ticket Event Dates", for more information on how Ticket data is stored in the TRF.

17. Create TRF Ticket Base and Annual Files

Once all the data for the Ticket Research File are created, then we separate it into a series of files to make the files a manageable size. We create a Ticket Base that contains Ticket event data such as Ticket mail and assignment dates and a series of Ticket Annual files that contain series of monthly flags for a given year that indicate participation in the Ticket program, for instance, in April 2004, does the Ticket participant currently have a Ticket assigned to a provider?

18. Create Payments Component

The EN payment data are initially supplied as an Excel spreadsheet, containing multiple records for beneficiaries, recording the events that triggered a payment to an Employment Network (EN). We convert the data to SAS and combine multiple records for a single beneficiary into a single record that preserves the information for multiple events such as dates, amounts, and type of payments (e.g. milestone or outcome), and the identifier of the EN to which payments were made. Extraneous Excel data, such as header and summary rows are removed.

19. Create RSA Linkable File

The RSA data are initially supplied by the Department of Education's Rehabilitation Services Administration (RSA) as text files, one for each year from 1998 through the most recent fiscal year. We submit the RSA data to SSA's EVS process, then convert the verified records to SAS format. Next we roll up all years of RSA data into a single-record per SSN, keeping a limited set of flag variables for each year.

20. Create VRRMS Linkable File

We convert the data to SAS format, then create the variables CLAIM_STATUS that groups the original C_PCODE variable into 6 categories describing the status of each VRRMS claim, e.g. "allowed", "denied", etc. Many SSNs have multiple VRRMS claims records; for multiple claims records, we determine if the claims history is complete and discard it if not. For complete histories, we roll the claims records up to a single record per SSN, summing the payment amounts. For

records with only a single claim, no summing of payments is needed. We output the SSN-level record, retaining the beginning and ending dates for the most recent claim, as well as the initial claim and the penultimate claim.

B. Development History

The following versions of the TRF database have been constructed so far:

1. The first version, TRF.1, was completed in the spring of 2004 and contained data on disabled beneficiaries who participated in SSI or SSDI from March 1996 up through August 2003. Monthly data for these participants was collected beginning in January 1994 and extending to August 2003.
2. The second version, TRF.2, was completed in July 2005. It built on the existing database by incorporating all beneficiaries already included in TRF1 and expanding it to include new beneficiaries who entered the SSI or SSDI programs from September 2003 through September 2004. Monthly participation data extended to December 2004.
3. The third version was named TRF05 to indicate that its contents included monthly data up through 2005. Construction was completed in July 2006. It built on the existing database by incorporating all beneficiaries already included in TRF2 and expanding it to include new beneficiaries who entered the SSI or SSDI programs from October 2004 through December 2005. Additionally, the selection criteria were revised to include SSI children who were age 10 or greater during 2005 and who participated in the SSI program from January to December 2005.7
4. The fourth version, named TRF06 to indicate that its data extends to December 2006, was completed in 2007. It built on the existing database by incorporating all beneficiaries already included in TRF05 and expanding it to include new beneficiaries who entered the SSI or SSDI programs from January 2006 through December 2006. However, unlike earlier versions, all annual files in TRF06 were reconstructed from scratch to smooth out some data inconsistencies that had crept in during earlier construction activities.
5. The fifth version, named TRF07 to indicate that its data extends to December 2007, was completed in early 2009. It built on the existing database by incorporating all beneficiaries already included in TRF06 and expanding it to include new beneficiaries who entered the SSI or SSDI programs from January 2007 through December 2007. A new component, Payments, containing data relating to payments to Employment Networks (ENs) was added. Additionally, the selection criteria were revised to include new benefiaries up to full retirement age entering the SSDI or SSI program during 2007.[8]
6. The sixth version, named TRF08 to indicate that its data extends to December 2008, was completed in late 2009. It built on the existing database by incorporating all beneficiaries

[7] See Chapter II, Section E, "Criteria for Selection" for further details.

[8] See Chapter II, Section E, "Criteria for Selection" for further details.

already included in TRF07 and expanding it to include new beneficiaries who entered the SSI or SSDI programs from January 2008 through December 2008.

7. The seventh version, named TRF09 to indicate that its data extends to December 2009, was completed in 2010. It built on the existing database by incorporating all beneficiaries already included in TRF08 and expanding it to include new beneficiaries who entered the SSI or SSDI programs from January 2009 through December 2009.
8. The eighth version, named TRF10 to indicate that its data extends to December 2010, was completed in 2012. It built on the existing database by incorporating all beneficiaries already included in TRF09 and expanding it to include new beneficiaries who entered the SSI or SSDI programs from January 2010 through December 2010.

1. Development of TRF Components

TRF.Demo: Records are added to TRF.DEMO for each successive version. The first version (TRF.1) contained records for beneficiaries participating between March 1996 and August 2003. The second version (TRF.2) added records for beneficiaries participating between September 2003 and September 2004, and updated records carried over from the previous version. The third version (TRF05) added records for beneficiaries participating between October 2004 and December 2005, and updated records carried over from the previous version. All subsequent versions (TRF06 and onwards) added records for beneficiaries participating between January and December of each new data year, beginning with 2006 and onwards, and re-constructed all existing beneficiary records carried over from the previous TRF version.

TRF.Annuals: the Annual components in the TRF database consists of separate files, one for each year from 1994 to the data year, e.g. TRF.1994, TRF.1995, and so on. Most variables in each Annual component have twelve occurrences, one for each month of the given year, except for identifying data items such as SSN. A record for each beneficiary exists in each annual file, and each annual file in the TRF contains the same number of records as in the Demo, with a one-to-one match between TRF.DEMO and each annual file. The TRF includes records for all selected beneficiaries who participated in SSDI or SSI from 1996 through the data year. Although selection for the TRF database is based on program participation beginning as early as 1996, data for participants also includes a two year look-back period, 1994 and 1995. Beneficiaries have records in

annual files for periods pre-dating their enrollment in SSI or SSDI and these are populated with zeros or missing values. For example, a beneficiary who entered the SSDI program in June 2005 will have missing values for all the SSDI monthly occurring fields, such as monthly benefit amounts, from January 1994 to May 2005.If a SSDI beneficiary is not concurrently enrolled in the SSI program, all SSI monthly occurring variables will be populated with zeros or missing values, and the reverse is true for SSI beneficiaries. However, sometimes SSI monthly benefit amount fields contain zeros when the beneficiary is not in the program, and for these cases, the corresponding monthly field, PSTAyymm (the SSI payment status variable for a given month and year), indicates whether a benefit amount of zero represents missing or valid data: 1) if PSTAyymm has a missing value, a benefit field with zero represents a missing value while 2) if PSTAyymm contains a value, a benefit field with zero represents a valid zero benefit amount.

TRF.TKT: The data for the TKT component of each TRF database is extracted and processed several months later than the data from the DBAD and CER100% Field files that serve as the basis for selecting new beneficiaries for inclusion in the TRF and which we usually process in January. This can lead to records in the TKT component with no counterpart in the Demo or Annuals components. Take, for example, a beneficiary, "Jane", who began SSDI participation in March 2011. When we began construction of TRF10 in the fall of 2011, we extracted data from the DBAD and CER100% Field files for January 2010 through December 2010, and naturally there was no record for Jane in those DBAD 2010 files as she had not yet begun participating in SSDI. But several months later when we processed the DCF data to build the TKT component, records for Jane were present in the DCF and thus were included in the TKT component. For this reason, there can be records in the TKT component of every TRF version with no counterpart in the corresponding DEMO component. Correspondingly, because the Ticket to Work program did not begin until January 2002, there are records for beneficiaries in TRF.DEMO with no counterpart in the Ticket data. For instance, a beneficiary who began participation in SSDI in March 1997 but left the

program in April 2001 before the Ticket program was operational will have a record in TRF.DEMO, but no record in the TKT component.

TRF.Payments: the Payments component includes data only on payments made to Employment Networks (EN's) for Tickets assigned to vocational rehabilitation services. As many Ticket participants receive services from other providers, the Payments component has far fewer records then other components of the TRF.

2. Changes in Source Data

The SSI monthly extracts currently used in construction of the TRF are known as the CER100% Field files files; previous versions were known as SORD and REMICS files. These files provide a snapshot of the beneficiaries participating in the SSI program during a given month. For TRF.1, REMICS (later SORD) files were used for each month beginning with March 1996 through August 2003. Note that no REMICS file was available for January or February 1996, therefore any beneficiaries who were on the SSI rolls during those months but who had left the program by March 1996 are not included in the TRF. For TRF.2, SORD files spanning the months from September 2003 to September 2004 were used to select SSI beneficiaries to be added to the TRF. For TRF05, SORD files for each month from October 2004 to December 2005 were used and for TRF06, TRF07, TRF08, TRF09, and TRF10, SORD or CER100% Field files from January to December of the latest available year (2006, 2007, 2008, 2009, and 2010 respectively) were used.

The SSDI monthly extracts currently in use are known as the DBAD files; previous files used were the ZIP extracts. Like the REMICS, SORD, and CER100% Field files, the DBAD files provide a snapshot of the beneficiaries participating in the SSDI program during a given month. For TRF.1, ZIP extracts were available on a limited basis, namely every six months between June 1996 and December 1998, whereupon they became available quarterly. Beginning with January 2001 the monthly DBAD files were used to select TRF beneficiaries up through August 2003. As with the SSI beneficiaries, it is possible that some beneficiaries who were on the SSDI rolls during the early

months were not selected for inclusion in TRF.1. For example, a SSDI beneficiary who entered the program in July 1996 but left the rolls after a short time, say November 1996, would not be included in either of the ZIP extracts for 1996 and would therefore not be in the TRF. For TRF.2, DBAD files spanning the months from September 2003 to September 2004 were used to select SSDI beneficiaries to be added to the TRF, while for TRF05, DBAD files from October 2004 to December 2005 were used, and for TRF06, TRF07, TRF08, TRF09, and TRF10, DBAD files from January to December of the latest available year (2006, 2007, 2008, 2009, and 2010 respectively) were used.

C. Data Disconnects Over Time

The methods used to collect data varied somewhat from one version of TRF to the next, and as a result, there were some apparent disconnects in the data added in later rounds, primarily in the longitudinal variables. It is worth noting that these data disconnects were smoothed over when TRF06 was built, and therefore users of TRF06 or later may skip over this section. However, users of TRF.2 or TRF05 should read this section.

In Round 1 we created the core database, TRF.1. In the second round, we updated and extended TRF.1 to create TRF.2, in the third round, we updated and extended TRF.2 to create TRF.05, and so on. For TRF.1, begun in 2003, monthly variables that spanned the period from January 1994 through August 2003 were extracted. The TRF.2 update, begun in 2004, added new beneficiaries and extended the monthly variables to December 2004. The extended monthly variables were obtained only for new and ongoing beneficiaries, leading to two issues, as described below.

1. Dropped Cases

The records for dropped cases, i.e., beneficiaries who no longer met the selection criteria, were not updated with the new monthly variables. As a consequence the monthly variables in the TRF for these beneficiaries suddenly change from valid values in TRF.1 to missing values in TRF.2.

However, it is quite likely that the corresponding variables in the SSA administrative data for these same beneficiaries would exhibit valid values, e.g., a payment status variable would be filled with a code for suspension or termination.

2. New Cases

The records for "new" cases contain missing values in the monthly variables going backwards in time from September 2003. These cases are "new" to us because they met selection criteria for the first time during the second round. But some of them may not be new to SSA and, in fact, the corresponding variables in the SSA administrative data for these same beneficiaries could exhibit valid values, e.g., a payment status variable could be filled with a code for suspension. In addition, for "real" new cases, i.e. beneficiaries who had recently come on the rolls, the corresponding variables in the administrative data may have been back-filled for the months between the initial application and the establishment of eligibility.

During construction of TRF.05, we decided to smooth out this break in the data observed for new cases. We accomplished this by constructing finder files with the SSNs of all SSDI and SSI beneficiaries in all rounds of the TRF, and submitted the finder file to SSA to extract monthly payment data for every month from January 2000 to December 2004. When the finder file results were returned to us, we used the data to update the corresponding monthly payment variables in the TRF.05.

To illustrate, suppose that in TRF.2, a SSDI beneficiary met our DBAD selection criteria for the first time in September 2003. This beneficiary would have missing values in the TRF monthly data from Jan 1994 to August 2003 and valid data from September 2003 onwards. However, it may take a couple of months for a new beneficiary to show up in a DBAD file for the first time. It is possible that the beneficiary applied for benefits in July 2003 but was not declared eligible until September 2003. This beneficiary could appear in the DBAD for the first time in September 2003 but the corresponding longitudinal data in the MBR would show that participation actually began in

July 2003. When we applied the new finder results to the TRF.05 for the beneficiary described above, we "back-filled" the monthly payment data back to July 2003. Only a few select variables were back-filled in this manner. Those variables are PAYSyymm, FPMTyymm, SPMTyymm, PSTAyymm, DUEDyymm, and LAFyymm.

For subsequent updates - TRF.06 and later – these problems of data disconnects are avoided by requesting updated data for all time-based variables in the TRF for all beneficiaries for all years. Specifically, for TRF.06, the annual files were re-written from scratch for every year (1994 to 2006) to remove the data inconsistencies between years. In contrast to earlier rounds, each annual file in TRF.06 now includes records for every selected beneficiary who participated in SSI or SSDI from 1996 to 2006, with 19,052,791 million records on each annual file. For example, a beneficiary who entered the SSI or SSDI programs in October 2004 will have records on the files for 1994 through 2006, although the data values will be missing until the 2004 file.

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VI. INDICATORS FOR "NON-PAYMENT STATUS DUE TO SUSPENSE OR TERMINATION FOR WORK" ALSO KNOWN AS "LEFT DUE TO WORK"

It can be difficult to determine from SSA administrative data whether a beneficiary is working in any given month. To aid researchers in making this determination, we constructed a series of monthly indicators based on a range of other variables. These indicators, initially named "Left Due to Work" (LDW), are described in this chapter. Note that SSA has recently replaced the LDW terminology with "Non-Payment Status Due to Suspense or Termination for Work" (NSTW). The term "Left due to work" is somewhat imprecise, so SSA has adopted NSTW for greater clarity. Recent published research using the term NSTW was based on the variables named LDW from the TRF10. Beginning with the 2011 data, we will rename the LDW variables to reflect SSA's new terminology, but for consistency with the variable naming convention in the TRF10 we continue to use the term LDW in the discussion below.

The LDW indicators can be helpful overall in discerning beneficiaries' work efforts but should not be considered definitive proof of a work attempt; they do not reflect a determination by SSA that a particular beneficiary was suspended or terminated from SSDI or SSI exclusively as the result of earnings. Instead, these variables reflect an interpretation of the SSA administrative data based on a complex algorithm. Further, the LDW indicator for termination reflects our determination of the effect of earnings for the month during which a termination of benefits occurs. While we will have evidence of work in that month, an LDW indication of continued termination of benefits due to work in subsequent months is based on a presumption of continued work rather than evidence of continued work. The LDW indicator is intended to be consistent with work exits under the Ticket to Work (TTW) program where working age individuals whose benefits are terminated for work are presumed to remain in that status unless they return to benefits, reach retirement age, or die.

The method used to construct the LDW indicators was developed in cooperation with SSA and Mathematica researchers, and is based on TRF variables that describe disability program

participation and status, benefit payment, income, and other indicators of work. For some cases, where one or more of these variables is absent, we developed substitute methods. This construction method has been refined over time; for more information on its current constitution, consult the TRF10 Construction Guide and TRF10 Data Dictionary. This chapter describes the indicators as included in the "V3" Annual files for TRF10. Users of prior TRF versions should consult the appropriate documentation.

A. Values of the Indicators

We developed three longitudinal strings of left-due-to-work (LDW) indicators, included in each Annual file and populated on a monthly basis. The LDWDI variable reflects work attempt status for beneficiaries in the SSDI program, the LDWSSI variable reflects work attempt status for beneficiaries in the SSI program, and the LDWCM variable reflects a beneficiary's left-due-to-work status overall. Each variable is named according to the month and year, e.g., LDWDI9401, LDWDI9402, LDWDI9403, up through the last month covered by the TRF.

The values for the LDWDI and LDWSSI indicators show the beneficiary's work attempt status in the specified program in any given month as follows:

- 0 = in current pay status in this month
- 1 = suspended due to work in this month
- 2 = terminated due to work in this month
- 3 = not in current pay status in this month, following a month of termination for work (see next section for more information about this category)
- 9 = not in current pay status in this month for a known reason other than work
- . (missing value) = beneficiary is not yet entitled to benefits, has died, or has reached FRA

In the SSDI program, a suspension or termination for work requires the beneficiary to have engaged in SGA. Researchers should be aware that an indication of suspension or termination for work in the SSI program, however, does not indicate any specific level of work or earnings. Because SSI suspensions and terminations are based on all sources of beneficiary income, including unearned

income, deemed spousal income, and in-kind support and maintenance, minimal earnings from work may be enough to push a beneficiary into suspense or terminated status. SSA administrative data does not distinguish between suspensions and terminations as a result of excess income from work versus excess income from other sources. The LDWSSI indicator therefore only captures beneficiaries who have a suspension or termination for excess income and some amount of earned income at any level in the same month.

B. Presumption of Work after Benefits Termination

A new category (3) was added to the LDW variables in TRF10 to indicate the months after SSA terminates benefits due to work and in which the beneficiary has neither regained eligibility, reached retirement age, nor died. In these cases, the beneficiary is presumed to have continued working after SSA's termination decision under the assumption that, had work stopped, EXR provisions would have been invoked. Note, however, that this is an extrapolation of SSA data and the indicator for any given month is not based on data for that month. For example, LDWDI0606=3 is an inference, based on program factors and reasonable assumptions, that a beneficiary is continuing to work at a level that would preclude SSDI eligibility. That inference, however, is not based on any SSA program data specific to June 2006 becase such data does not exist; SSA no longer collects beneficiary work information after benefits have terminated. Researchers should understand the inherently speculative nature of a 3 value in the LDW indicators in their study designs.

C. Auxillary Beneficiaries in SSDI

Auxillary beneficiaries to an adult primary SSDI beneficiary in the TRF can include disabled adult children (DACs) and disabled widow(er)s. During consultations with SSA staff, we learned that any evidence of suspension or termination on an auxilliary's record may actually belong to the adult primary. As a result, if an auxiliary beneficiary is flagged as suspended or terminated following the above LDW methods, further checks are done to ascertain whether the suspension or termination is properly attributed to the appropriate beneficiary.

SSDI records contain two identifying variables: 1) the CAN (the SSN of the primary beneficiary) and 2) the BOAN (the beneficiary's own SSN). For primary beneficiaries, the CAN is the same as the BOAN. For auxiliary beneficiaries, the CAN is the SSN of the primary beneficiary, generally a parent or spouse, and the BOAN is the auxiliary's own SSN. When constructing LDW indicators, we therefore take note of the CAN when a primary beneficiary is flagged as suspended or terminated due to work. Later, if a DAC record is flagged as LDW, we check to see if its CAN variable is the same as the CAN of a flagged primary beneficiary. If so, we assume that the suspension/termination information belongs to the primary beneficiary and not to the DAC.

D. Combined LDW Indicators

The Combined-Left-Due-to-Work indicators were developed by taking into account the LDW status for both SSI and SSDI programs. Because outcome payments to Employment Networks (ENs) are generated only if the beneficiary is not receiving benefits in either program, we anticipate that these indicators will more accurately reflect outcome payment status than either the separate SSI or SSDI Left-Due-to-Work indicators. For example, using the program-specific Left-Due-to-Work indicators, it is possible for a beneficiary to be coded as "left due to work" in one program but coded as "in current pay status" in the other program. In this case, the Combined-Left-Due-to-Work indicator will be coded so as to indicate the beneficiary still has some level of benefits, namely "in current pay status." Another way to think about the combined LDW indicator is that, in general, the lower LDW number takes precedence, i.e., if LDWDI=0 and LDWSSI=1, then LDWCM=0, and if LDWDI=3 and LDWSSI=2, then the combined LDWCM=2.

The left-due-to-work LDWCM variables show the beneficiary's LDW as follows:

- 0 = in current pay status in this month for either SSDI or SSI
- 1 = suspended due to work in this month for either SSDI or SSI and not in current pay in this month for the other program
- 2 = terminated due to work in this month for either SSDI or SSI and not in current pay or suspended for work in this month for the other program

- 3 = not in current pay status following a month of termination for work for either SSDI or SSI and not suspended or terminated due to work for the other program
- 9 = not in current pay status for reasons other than work in this month for either SSDI or SSI and not suspended or terminated due to work for the other program
- . (missing value) = beneficiary is not yet entitled to benefits, has died, or has reached FRA

We anticipate that LDWCM will be the indicator of most interest to researchers. However, given a thorough understanding of how all three LDW indicators are constructed and work together, researchers may reasonably decide that LDWCM does not meet their needs. For example, a researcher interested in *any* loss of benefits due to work will want to use LDWDI and LDWSSI. The important thing is studies are designed with the differences in mind, and the appropriate indicator used for each particular study question.

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